

THE ARCHITECT & BUILDING NEWS

IN THIS ISSUE

- FACTORY AT DOVERCOURT BAY
- EXTENSION TO IMPERIAL HOTEL,
TORQUAY

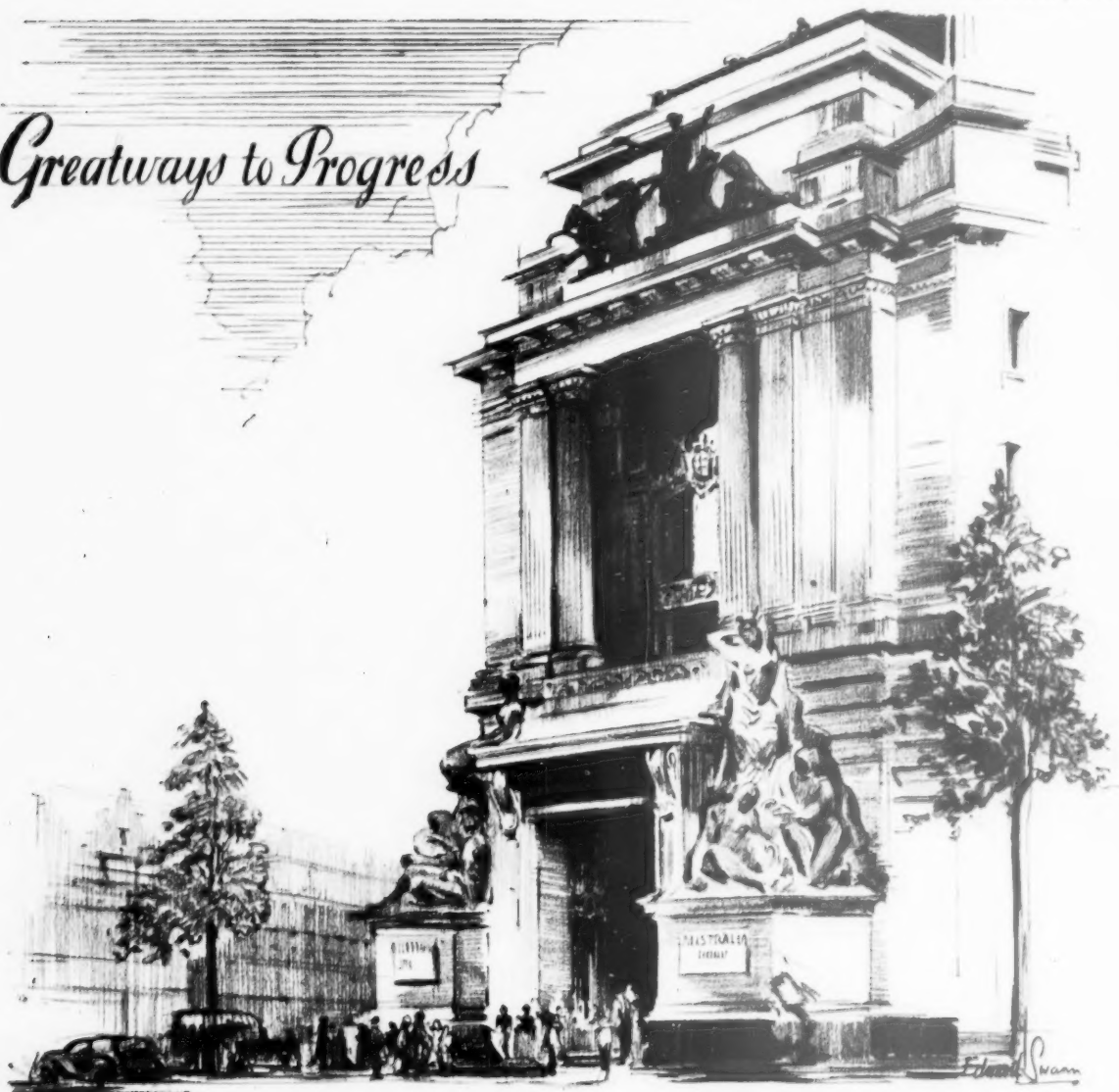
APRIL 2, 1953

VOL. 203

NO. 14

ONE SHILLING WEEKLY

Greatways to Progress



Australia House—

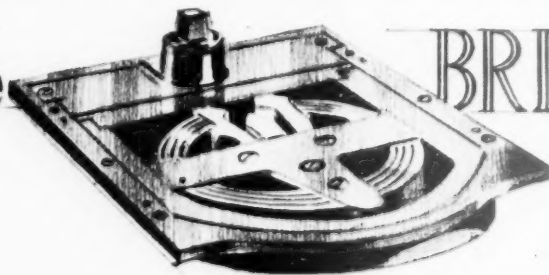
Foundation Stone laid by H.M. King George V, 24th July, 1913

Officially opened by H.M. King George V, 3rd August, 1918

Architects—A. Marshall Mackenzie, & Son, F.F.R.I.B.A.

Britannic Floor Springs are again being used in the re-ccnstruction and modernising of Australia House

The



BRITANNIC

Floor Spring

Specified by leading
architects

WILLIAM NEWMAN & SONS Ltd
HOSPITAL STREET, BIRMINGHAM 19. *Established over 200 years.*



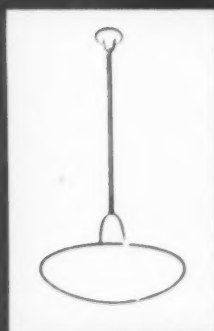
Troughton & Young Ultralux lighting fittings, so admirably suited to various types of buildings, are here installed throughout the new offices of Sir Robert McAlpine & Sons at Hemel Hempstead. We make special fittings to individual designs or can supply from our standard Ultralux, Tubalux, Versalite and Mondolite ranges. On the right are illustrated a few examples of Ultralux lighting fittings. Architects are invited to see our complete ranges at the Lighting Centre, Knightsbridge.

TROUGHTON & YOUNG (LIGHTING) LIMITED

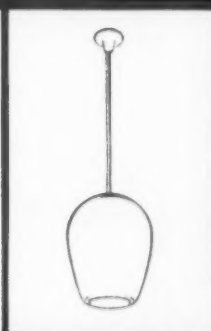
The Lighting Centre

143 KNIGHTSBRIDGE, LONDON, S.W.1

TELEPHONE: KENSINGTON 7457 (15 LINES)



G.14, pendant fitting.
Lamp: 150 watts



U.202, pendant fitting.
Lamp: 200 watts



U.26, ceiling fitting.
Lamp: 100 watts



U.211, ceiling fitting.
Lamp: 200 watts



G.4, ceiling fitting.
Lamp: 2 x 75 watts



U.27, ceiling fitting.
Lamp: 150 watts

ZINC

in 

plenty

Flashings and hoods, rainwater goods and weatherings—from roof to foundations zinc plays an important part in building. Our illustrations show contemporary houses roofed with zinc laid on the standing seam system. The roofing of the Cowley Peachey houses has an added interest because it has been laid on insulation boarding to combine good insulation with lasting protection.

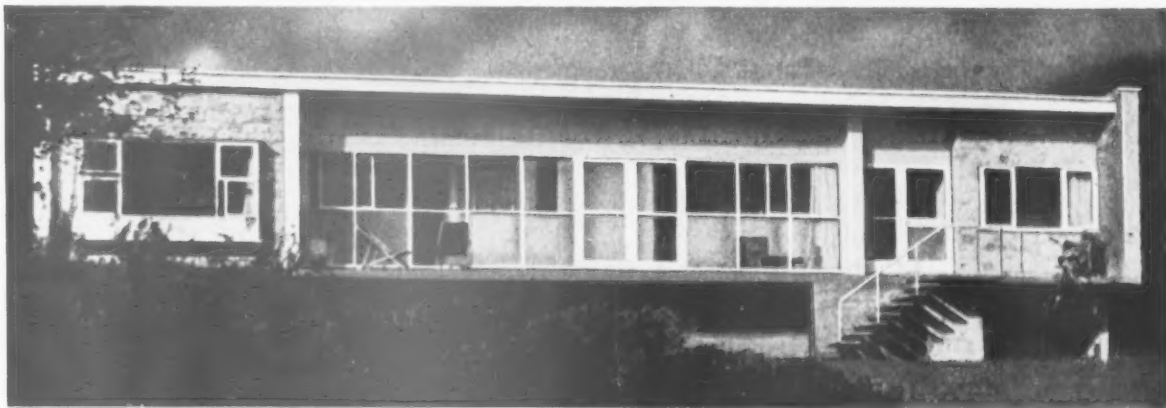
There are now no restrictions on the use of zinc. Supplies are plentiful and are likely to remain so for many years to come.

The price of zinc has dropped considerably and it is again one of the most economical roofing materials.

The Zinc Development Association will be pleased to send to potential users lists of stockists of all zinc building materials and of firms specialising in zinc work.



TERRACE HOUSES AT COWLEY PEACHEY. Architects: F. R. S. Yorke, F.R.I.B.A.; E. Rosenberg, F.R.I.B.A.; C. S. Mardall, A.R.I.B.A.



HOUSE AT LUGGOMBE, I.O.W. VIEW FROM SOUTH-WEST. Architect and owner: F. R. S. Yorke, F.R.I.B.A.

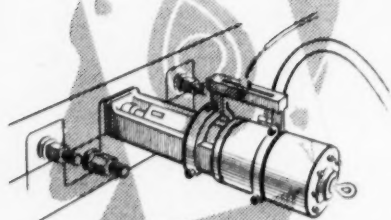


View of standing seam zinc roofing.

think ZINC

ZINC DEVELOPMENT ASSOCIATION · LINCOLN HOUSE · TURL STREET · OXFORD · Tel: 47988

3 strong cards..

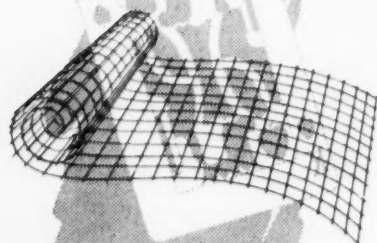


"MACALLOY" BARS FOR USE WITH LEE McCALL SYSTEM OF PRESTRESSED CONCRETE.

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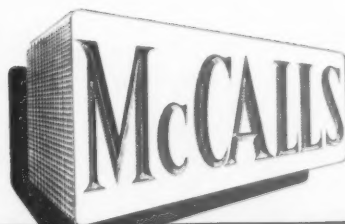
"ISTEG" STEEL REINFORCEMENT (MANUFACTURED UNDER LICENCE).

Twin Twisted Bars to B.S. 785-1938 and B.S. 1144-1943. Working Stress of 27,000 p.s.i. Steel bars with a combination of twist and cold working, giving 50 per cent. improvement in tensile stress; 30 per cent. less weight of steel. Improved bond, hooks and overlengths eliminated.

INCREASED WORKING STRESSES.

The stress of 27,000 p.s.i. complies with C.P. 114, but in certain circumstances these stresses may be increased to 30,000 p.s.i. if due care is taken in the design, thereby showing still greater steel economy as recommended in the Ministry of Works Steel Economy Bulletin No. 1.

REINFORCEMENT BY ..



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in architecture could never have found
expression without concrete.
This flexible medium has made possible
the revolutionary buildings
of our era — soaring skyscrapers,
immense blocks of flats,
massive power stations. Versatile,
strong, enduring, concrete owes its
character to the cement from which it is
made and has come to be
recognised as a

***symbol of
progress . . .***



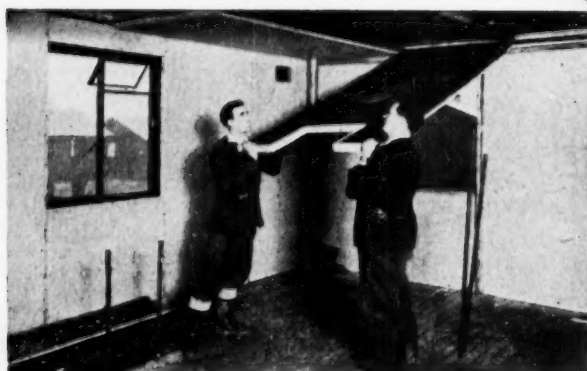
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S.R.P.C. Sulphate Resisting Cement, 'Snocem' Cement Paint, etc.

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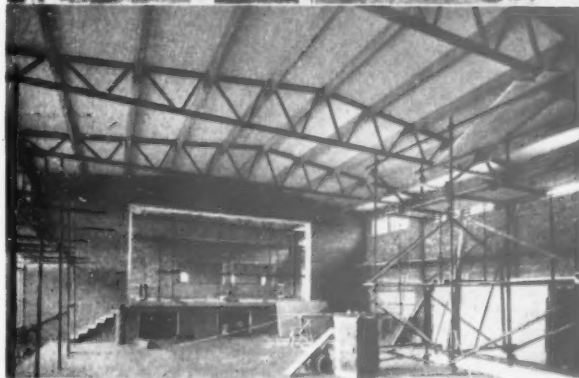
In more ways than one...



Above: Stramit being used as Ceiling Boards to provide insulation in 500 steel frame houses for Birmingham (H. J. Manzoney, City Engineer).

Right above: Stramit as partitioning for large R.A.F. Station in the Midlands. Note small amount of framing required. (Photos are by courtesy A.M.W.D.).

Right below: Large Stramit Board as Roof Decking to Primary School at Leighton Buzzard. On this contract some of the Stramit Boards are 18' by 4' (Architects: Peter Dunham Group, Luton).



Our pictures show Stramit being used in its three main applications—Roof Decking, Partitioning and Insulation. On each of these contracts, and on very many more the Architect and Builder have found in Stramit a board of great strength that can be erected with the minimum of framing and labour.

Stramit is fire resistant, with a finished surface ready for decoration; it requires no screed when used as a roof decking.

The technical properties of Stramit, its applications and limits are outlined in our descriptive literature and we shall be pleased to send you this information if you will write to the address below.



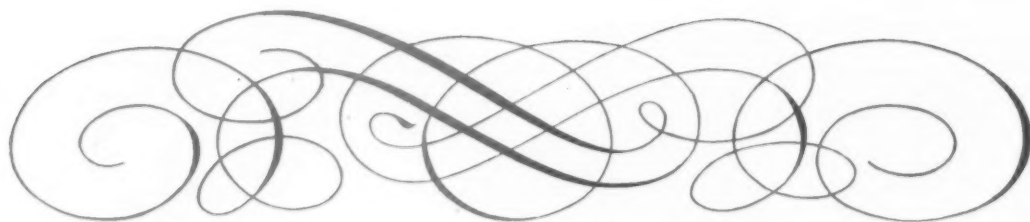
Dept. L.A.2.

STRAMIT BOARDS LIMITED

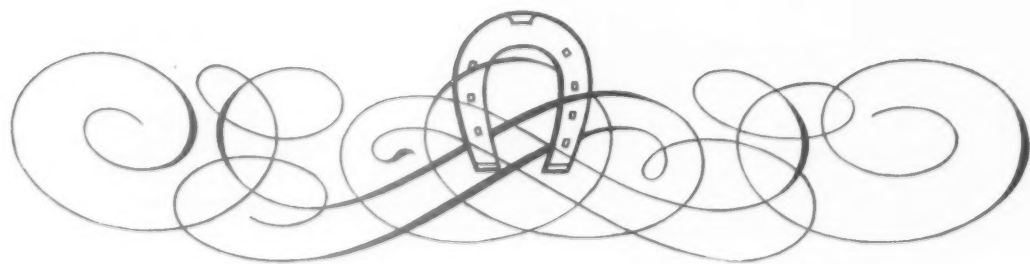
PACKET BOAT DOCK, COWLEY PEACHEY, UXBRIDGE

Telephone: West Drayton 3021

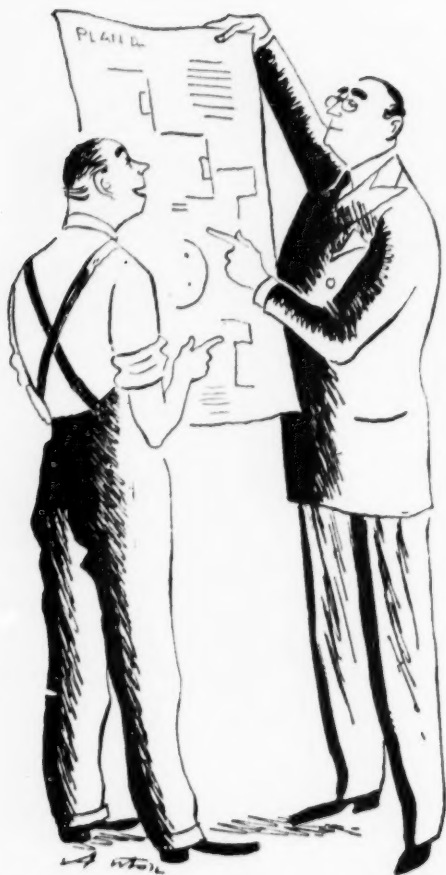
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ELECTRICITY and Production

PRODUCTION for more exports, production for the home market . . . how can production be increased? Two important ways are by the elimination of unnecessary handling of materials and by the more intensive use of power tools. In fact, by calling in Electricity to help.

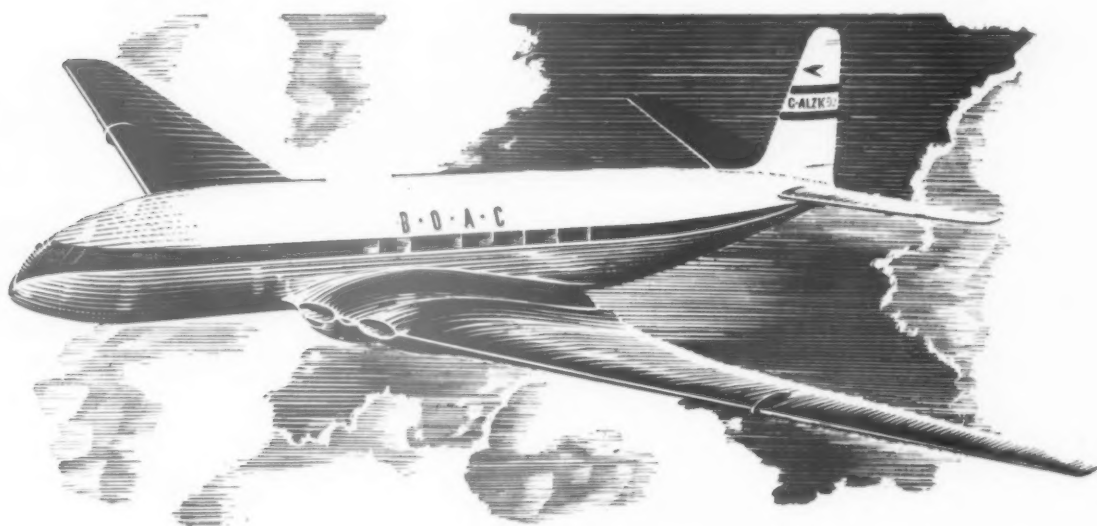
Production of Electricity

BRITISH ELECTRICITY is doing everything possible to ensure the supply of electricity for these vital needs. Last year, all records for plant installation were broken: more than 1½ million kilowatts—equivalent to over 2 million horsepower—of new plant began feeding the National Grid. Every effort is being made to maintain this progress.

Electricity is a valuable commodity—far too valuable to waste. For more production, use more power, more efficiently.



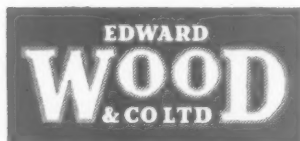
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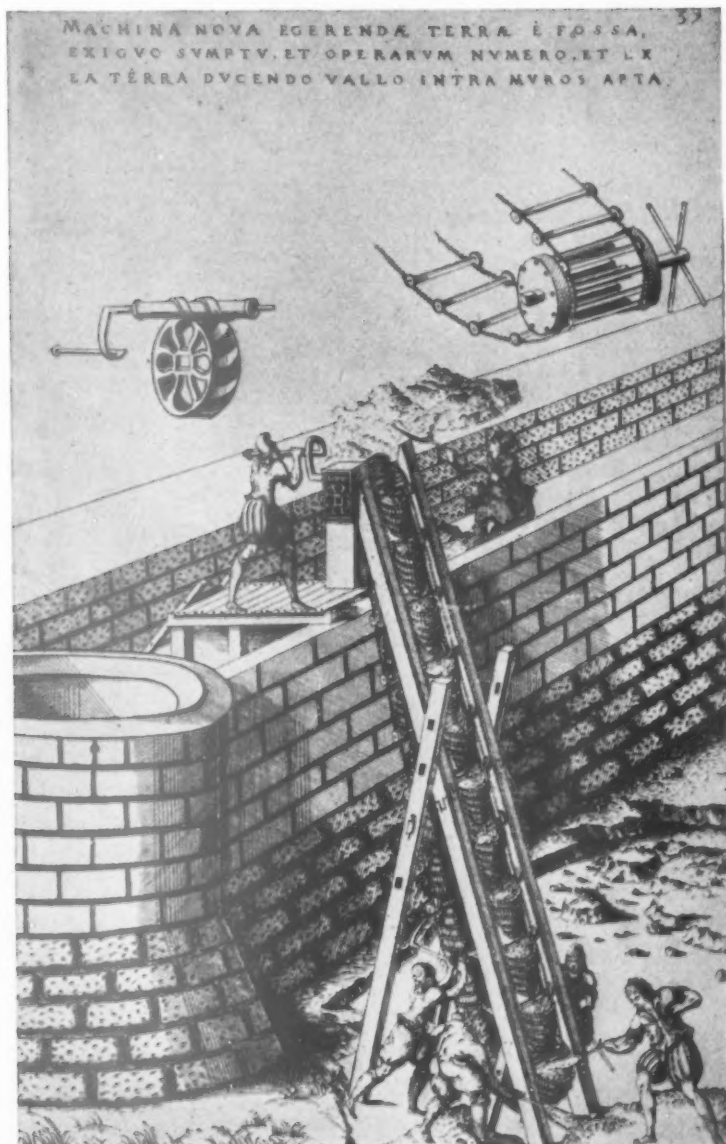


Photo by courtesy of "Picture Post"

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by
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Other engines turn anti-clockwise on the starting handle; for these, conversion kit type 'R' is required.

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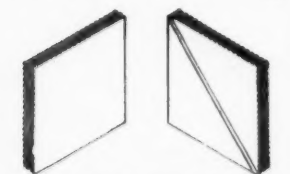
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LEEDS

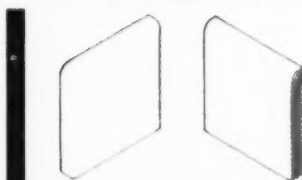
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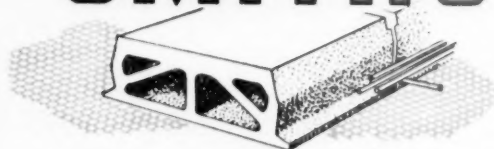
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**SHOPS and FLATS on the
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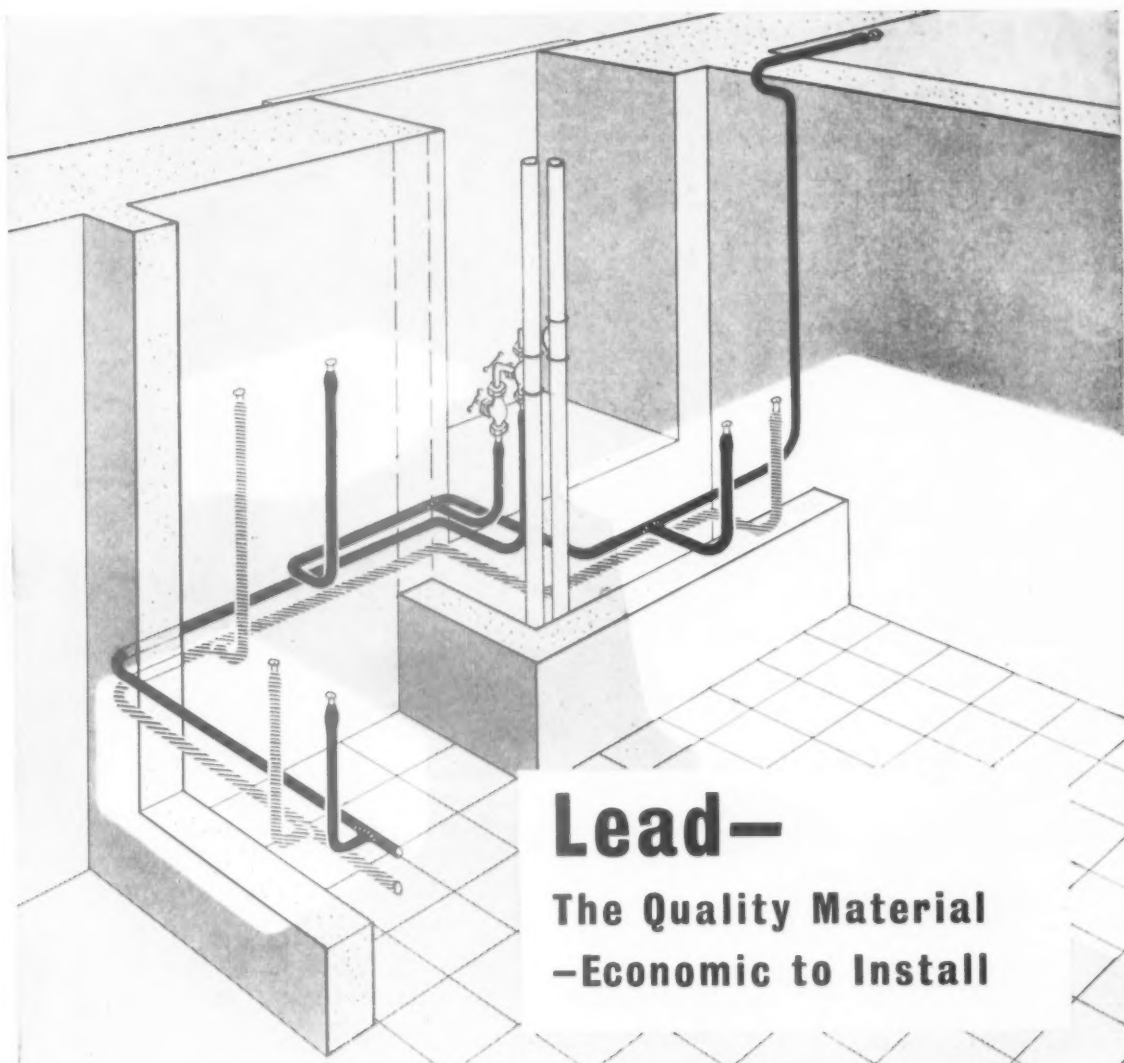
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Well designed modern plumbing is compact in layout; for concealment and protection against frost damage main distributions are commonly fixed in ducts. Branch connections, usually short, from the main to the appliances and fittings, have to be fixed in a confined space.

LEAD PIPE is easy to fix even in the most difficult circumstances. The flexibility of the material is such that it is easily connected up to the appliances and fittings without risk of leaving a permanent strain on them. By specifying lead or lead alloy pipe to the relevant British Standards:

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a material of consistent high quality is obtained.

Lead sheet, lead pipe and lead traps can be delivered immediately for all building work.

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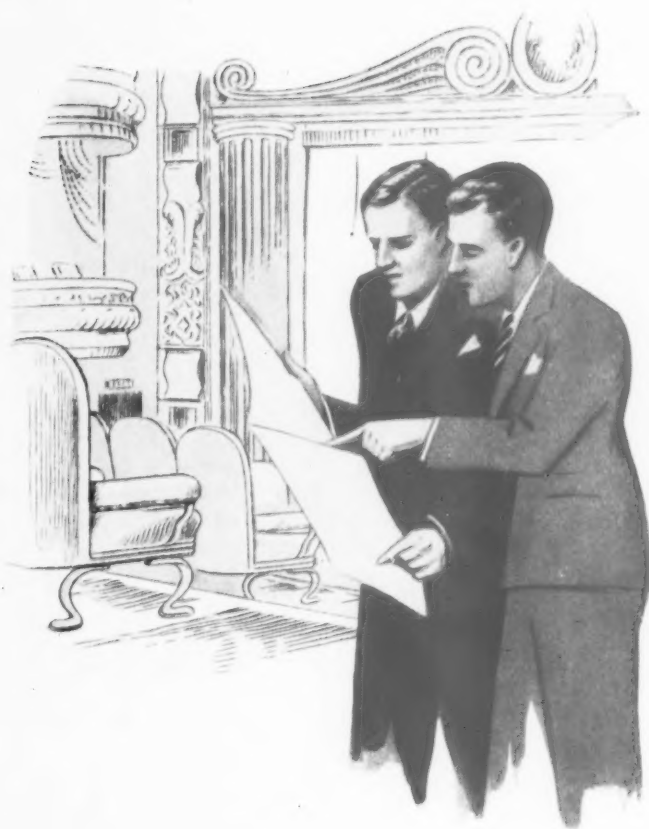
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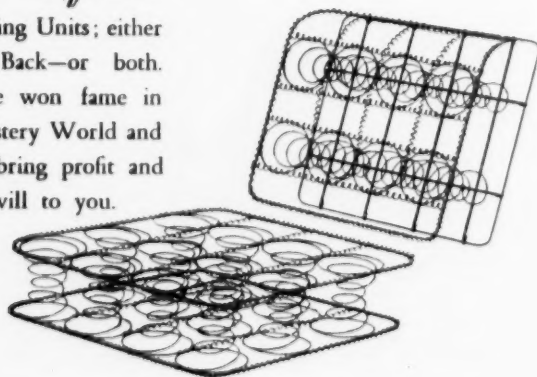
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In the re-styling and refurnishing of theatre and cinema interiors, seating plays a major role—it must be in tune with the surroundings. To get to the heart of the matter, nothing less than TWIL Spring Units can supply that comfortable, undistracted relaxation for which the occasion calls. They are BEST by TEST—and BEST for REST.



These are the famous

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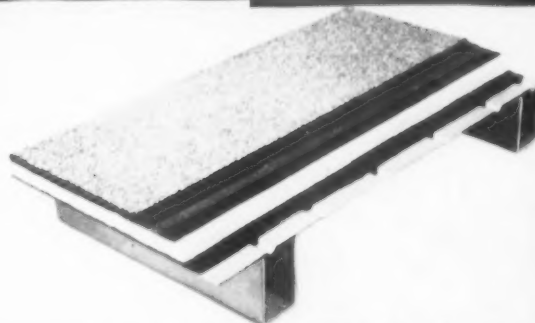
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"PERMADEK" Insulated steel roof decking is a composite roof built up from pre-formed steel sheets, insulation board and bituminous felt roofing, this was also selected for all buildings. The "PERMADEK" System and method of fixing can be clearly seen in the illustration. This type of roofing is being specified by architects for all types of industrial premises, schools, domestic and public buildings.

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BRANCHES THROUGHOUT THE PROVINCES

Cheap Domestic Hot Water

THE FACTS OF A SECONDARY SYSTEM

Every home fitted with a solid fuel water heating apparatus also needs a secondary system. In the summer it is uncomfortable and extravagant to have a fire going to provide intermittent hot water in the kitchen, where it is constantly in demand. Even in the winter the supply from the solid fuel system falls short of kitchen needs unless fuel is burned briskly most of the time.

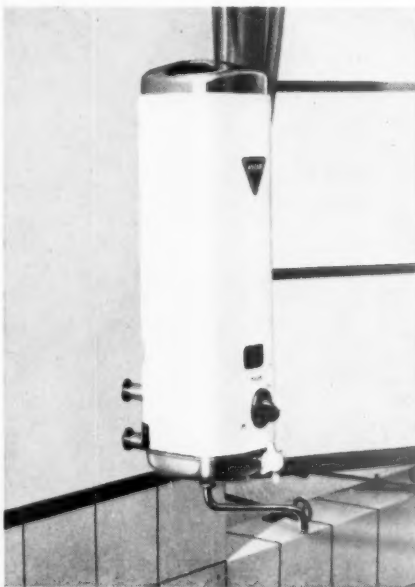
There is no necessity for the secondary system to provide a bulk supply, as the demand for large quantities of hot water for bathing is pre-arranged in the majority of homes. What is absolutely necessary is an instant supply at the kitchen sink for washing-up, washing clothes, toilet purposes, bathing the baby, cooking and domestic cleaning.

Gas, used in one of the Ascot sink water heaters, provides such a service. The Ascot water heater only uses fuel while the hot water is actually being drawn, and heats just the amount of water required for each job, so there is no wastage. The instantaneous heater

has a high rate of efficiency and is very economical. It neither divides its heat output between water heating and space heating, nor wastes by-products of coal distillation up the domestic chimney.

The capital cost is lower than any other secondary system. Lagging a storage tank is unnecessary, and this pleases housewives who rely on the tank to warm airing cupboards.

To minimise the cost of installing gas and water services at the sink for these heaters, and thus to make them irresistibly suitable for housing estates, the Ascot Company has developed the Jigged Wall Fitting, which is chased in during the erection of dwellings, cost being negligible at carcass stage. If the Ascot Sink Water Heater is not fitted



An Ascot installation using the Jigged Wall Fitting

before occupation, this can be done at any time in a few minutes without disturbing or affecting the decorations. Architects, surveyors, builders and housing authorities are invited to investigate this simple and inexpensive method of providing a secondary hot water system. Their attention is drawn to the facts that it creates no peak-load problems, and that a supply of piping hot water is always available day and night, winter and summer, at the turn of a tap.

More than 44 housing authorities have already adopted the system and more than 20,000 jigged wall plates have been installed.



A leaflet is available and full details will gladly be supplied.

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THE
ARCHITECT
& BUILDING NEWS

April 2 1953

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RESEARCH AND THE BUILDING INDUSTRY

THERE is a growing realization of the usefulness of organized research in industries which have hitherto relied almost entirely on tradition and craft experience. The notable examples are, curiously enough, two of the oldest industries upon which our national existence depends, agriculture and building. The former's awakening to efficiency through scientific advice and experiment is outside our field, but the gradual penetration of research in the building industry calls for comment and continuous assistance.

Viewed objectively, the industry still lags behind in any full and adequate use of the resources of scientific research in spite of its great growth sponsored by the Department of Scientific and Industrial Research and its Building Research Station, and by the more localized work put in by individual firms purveying particular materials. The fact that resources are not used is realized more fully by the researchers than by those for whom the research may be an asset for efficiency and profit and it would be interesting briefly to examine the causes which are generally accepted as sound reasons for this circumstance.

In all precise and scientific expositions the method of expression may be specialized and terse and require a mental effort to apply to practical circumstances and common use. The building industry, being what it is, based in work from a long tradition of craft training, finds this process difficult. Newer industries, for example those dependent on electronics, are born into a scientific atmosphere and find growth and strength in continuance in the same nursery; they have not to change a mental attitude as well as material methods in order to progress.

The research organizations are well aware of this reticence to change which exists in the building

industry and increasing efforts are being made to simplify data and advice for easier and quicker use by those on sites and in workshops. But it is difficult to improve such a situation without reciprocal action from the receiving end. We are glad to learn, therefore, that some Regional Federations of the National Federation of Building Trades Employers have set up a form of machinery to help their members on technical problems. Not only is this an important move from the point of view of dissemination of knowledge, but it is potentially a way which can be adapted to carry through large-scale site experiments or trials wherever these are necessary or urgently needed as proving methods. Theories evolved in laboratories are ultimately dependent for success upon practice. Technical groups within the industry itself can tie things up much better than the research workers, even though the latter may split their time more or less equally between the experimental bench and the actual site.

A major reason, however, for lack of cohesion and even comprehension in these matters, is that the building industry is composed of so many small individual units, varying in size from the so-called "one-man firm" to the contractors employing many hundreds of hands and with branches in several places in the country. This central problem of organization is one which the industry has to face from all viewpoints with much greater intensity.

At a recent conference on Research held by the N.F.B.T.E., the Secretary of the D.S.I.R., Sir Ben Lockspeiser, suggested that small building firms should be more closely linked with maintenance work and should be encouraged, where possible, to specialize in some particular field of sub-contracting work, plastering, painting, plumbing, tiling and so on, so that there could be more contact and cohesion

between the several sides of the industry. Disintegration is the enemy of scientific research; unless findings can be applied by an integrated industry, they are doomed to failure.

Sir Ben made another suggestion which the industry would do well to follow up and to expand into practical policy. Machinery is now an essential part of efficient construction of any size, but it is an expensive matter for the smaller firms to keep up with even the essential requirements of mixers, hoists, diggers and the like. Sir Ben's suggestion was for the establishment of a regional service for the co-operative use of machinery within the region, set up, presumably, on a hire basis. Agricultural requirements for the larger sorts of equipment are already tackled in this way, why not those of building?

If efficient planning of production and quicker handling of materials with less waste of manpower and materials can be achieved, then there seems no reason why the cost of building cannot be reduced and, because production would go up through increased efficiency, why the builder stands to lose anything at all. The industry is learning these things too slowly, though there are signs that the pace is quickening.

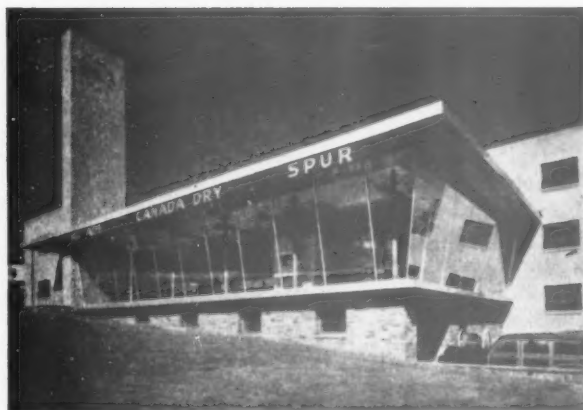
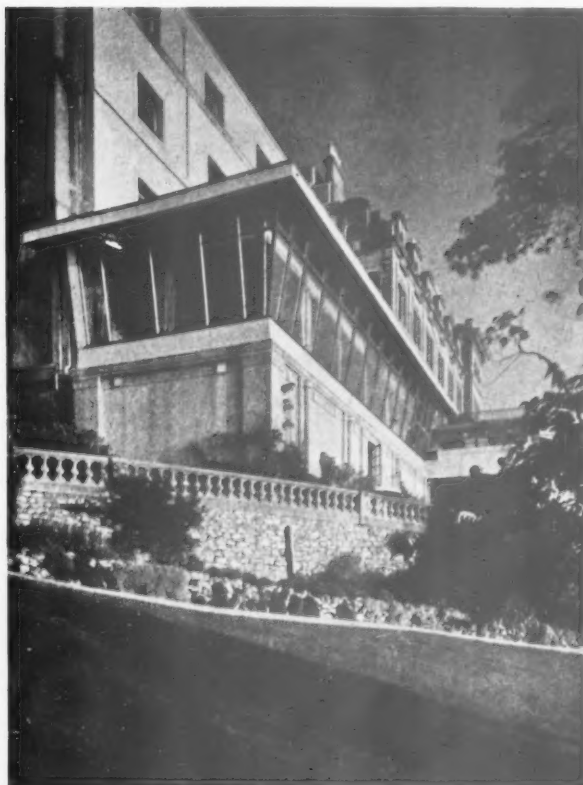
EVENTS AND COMMENTS

QUEEN MARY

The death of Queen Mary is a great loss to us all but is also a very special loss to those of us whose youth was spent in the reign of George V. She was always the embodiment of queenliness and has been described as the last great figure of the Victorian age. She was at the same time most up to date in her outlook. Her Majesty's visit to the Building Centre in 1949 will always be remembered by those who had the privilege of escorting her round the exhibition. Her extraordinarily wide knowledge of buildings and materials and above all her interest in everything new made a very great impression. When asked at the end of an hour whether she would care to rest—she was then over eighty—she replied "No thank you, I am not in the least tired and I wish to see everything."

COUNT RUMFORD

Thanks to an article in *Discovery* I have at last discovered something about Count Rumford whose theories about open fireplaces and flues are still up to date 150 years after they were evolved. He was born Benjamin Thompson in 1793 in America and, after a hard early life of study and schoolmastering, married the daughter of a rich parson. He was commissioned into the British Army as a Major and worked in the Secret Service. Later he travelled to England and became Under-Secretary of State in the Colonial Office. He continued to study and to



By chance C. Howard Crane, architect for the Dining Room Extension, the Imperial Hotel, Torquay, (top picture) (see also pages 393-395) strikes a similar note to the Showroom for the Davis Bottling Company's Plant, Maryland, U.S.A., designed by Reisner & Urbahn. (bottom picture).

carry out scientific experiments—as a young man he had blown himself up making fireworks. He was elected an F.R.S. in 1779. Later after being pensioned from the army Thompson went to the continent and was offered the job of carrying out various reforms for the Bavarian Elector. When he applied to George III for permission to accept he was knighted and presumably given the per-

mission for he was soon appointed Bavarian Minister of War, Minister of Police, Major-General, Chamberlain of the Court and State Councillor. He sorted out the army and studied its feeding problems and, having done that, removed the beggars from the streets of Munich by giving them work, food and warmth in a "Military Workhouse." He designed a special kitchen range for the workhouse, a closed stove with a separate fire for each pot. He even invented a stew, said to be known to this day in Germany as Rumford soup. Thompson was created an Imperial Count for his services and took the name Rumford from the town where he met his wife in America. He always seems to have been unpopular and when the Elector was petitioned to get rid of him he returned to England and scientific study. He continued to invent cooking devices but is best known—at least in the building industry—for his work on the open fire. This invention was known as the Rumford stove and it was he who laid down that the throat of a fireplace must not exceed 4in in width. His principles are contained in Building Research Station Digest No. 18. Rumford foretold the day when the open fire would be no more and condemned the folly of sitting in a room which has a blazing fire roasting one side of the body, while blasts of cold air are coursing the apartment.

He continued his scientific researches concentrating upon heat and carried out important experiments in Munich whether he had returned at the request of the Elector to deal with the threat to the town of two hostile armies—the French and the Austrian. Removed once more because of his unpopularity he returned to England to become one of the founders and the Secretary of the Royal Institution. He seems to have quarrelled with everyone and eventually returned to a large house near Paris where he spent the last 12 years of his life. He married Lavoisier's widow but it was not a success. Soon after Waterloo he died and was buried at Autering. His last work was an essay on coffee making and drinking addressed to the British people.

THE FLIES

Let me say at once that J. P. Sartre is not my cup of tea and I went to the New Boltons Theatre to see the Section AA Theatre Group's production of "The Flies" with a heavy heart. The performers, most of whom are now qualified architects, have been acting together for five years and have given much pleasure to their supporters in a number of productions. "The Flies" gave me little pleasure—"it wasn't meant to" they will cry—I found nothing pleasurable, funny or edifying in the constant references to puss, matter and dirty underclothes. Again I hear the cry that I was not meant to. The plays of Sartre are of the theatre of our time and should, of course, be performed. But I must be honest and say that I think that this company should not spend all its efforts on this type of play. Section AA quite rightly wants to leave the beaten track but it should also avoid the sordid groove.

Having said my rude piece let me be kinder. The production of Julian St. Leger was excellent and at its best in the crowd scenes. The sets were simple and most effective in appearance although they would have been more rigid in welded tube than in nailed broomstick. Lessons on bracing and space frames were, I am told, learned during its construction.

Roderick Hamm as Zeus was a splendid figure perhaps more like Sir Francis Drake just returned from an overland trip to India than a tough head-god from Olympus,



Under their art master, Mr. Davison, boys at Owens School have designed and executed paper mosaics which are being put up as mural decorations in Finsbury Central Library. The Football one above is by one boy, but others are the work of groups. Sheets of paper are painted in different tones of colour and then torn up into mosaic-size pieces, which are then stuck on large sheets of tracing paper and finally mounted. The mosaics are lively and effective. The boys responsible are between 13 and 15 years old.

but nevertheless very imposing. John Donat I found rather wooden, he spoke his words well but he could never have murdered two people in cold blood. Joanne Wood, who played Electra, is a very good addition to the company, she is not, I believe, from the AA. Michael Browne as Aegisthus was as revolting as only Michael Browne can be, and lovely Patricia Bullivant was very nearly as horrible. It is high time that this accomplished actress was given a part other than that of a mythological trollope with circles under her eyes.

The company without doubt progresses technically and has almost passed from the amateur to the professional in its skill. It will not completely do so until it has mastered the use of its hands.

ABNER

NEWS OF THE WEEK

Presentation of Royal Gold Medal

The Royal Gold Medal for Architecture for 1953 will be presented to the French Architect, Le Corbusier (Charles-Edouard Jeanneret), at the Royal Institute of British Architects, 66, Portland Place, W.1, on Tuesday, March 31, at a ceremony commencing at 6 p.m. The presentation will be made by Mr. Howard Robertson, M.C., A.R.A., S.A.D.G., President of the Royal Institute, after the following have contributed short speeches: Sir Herbert Read, Mr. Robert H. Matthew, C.B.E., A.R.I.B.A., Architect to the London County Council, Mr. Wells-Coates, O.B.E., Ph.D., B.A., B.Sc., F.R.I.B.A., and Mr. Colin Glennie, Student.

Monsieur Le Corbusier will be escorted to the platform



Y.M.C.A. Indian Students' Union and Hostel, Fitzroy Square, Architect Ralph Tubbs, which was opened by H. E. the High Commissioner for India last Tuesday. A full description of the building will appear in a future issue.

by two past Royal Gold Medallists, Mr. Edward Maufe, R.A., M.A., Hon. LL.D., F.R.I.B.A., and Dr. Charles Holden, D.Litt., Litt.D., M.T.P.I., F.R.I.B.A.

Joint Committee on Tendering Procedure

The committee, under the chairmanship of Mr. Howard Robertson, P.R.I.B.A., held their first meeting on March 20. The Secretary, Mr. W. Arthur Rutter, reports satisfactory progress.

New Chairman of Building Apprenticeship and Training Council

Sir George Gater, G.C.M.G., K.C.B., D.S.O., Chairman of the Building Apprenticeship and Training Council since 1947, has tendered his resignation to the Minister of Works.

The Minister has appointed Sir Frederick Leggett, K.B.E., C.B., as Chairman of the Council with effect from April 1, 1953. Sir Frederick Leggett, K.B.E., C.B., was Deputy Secretary and Chief Industrial Commissioner of the Ministry of Labour and National Service prior to his retirement in October, 1945.

R.I.B.A. Library Group

The next meeting of the Library Group will be held on Monday, April 13, 1953, at the Royal Institute of British Architects, 66, Portland Place, W.1, at 6 p.m.

Mr. R. E. Enthoven, A.A. Dipl., Vice-President, will introduce an evening to be devoted to the work of Ernest Newton, R.A. (1856-1922).

C.O.I.D. New Members

The board of Trade announces that the President has appointed Mrs. Alison Settle, Mr. J. Cleveland Belle, Mr. A. E. Hewitt and Mr. Osbert Lancaster to be members of the Council of Industrial Design. He has also re-appointed Mrs. Helen Bentwich and Mr. Robin Darwin to be members of the Council on the termination of their existing appointments.

ANNOUNCEMENT

Erno Goldfinger, D.P.L.G., L.R.I.B.A., 69-70, Piccadilly, W.1, announces that his telephone number has been changed to Hyde Park 5210/5657.

CHANGE OF ADDRESS

Messrs. Grimwade & Ainsley, Quantity Surveyors, announce a change of address from 21, Catherine Place, Westminster, to 5, Victoria Street,

Westminster, S.W.1 (Tel.: Abbey 5016-7).

COMING EVENTS

London Master Builders' Association

April 8 at 2 p.m. General Meeting of Central Area No. 1. Guest speaker, R. G. Thomson, A.C.I.I., Secretary of the Builders' Accident Insurance, Ltd., at Derry & Tom's Restaurant, Kensington High Street, W.8.

The Modular Society

April 9 at 7.30 p.m. General Discussion on Modular Co-ordination at the Royal Society of Arts, John Adam Street, Adelphi, W.C.2.

Town Planning Institute

April 9 at 6 p.m. Talk on "The Contribution of the Sociologist to Town Planning," by Professor T. S. Simey, M.A., at The Livingstone Hall, Broadway, Westminster, S.W.1.

CORRECTIONS

Birley Junior School, Derbyshire. Messrs. John Dudding and Partners were the Landscape Architects and Messrs. Barons, Ltd., carried out the work. In the article in last week's issue, the names were regrettably transposed.

Prototype Houses for Hemel Hempstead: The plans on pages 376 and 377 should be transposed.

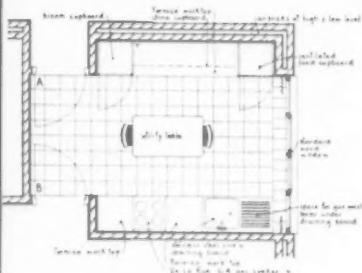
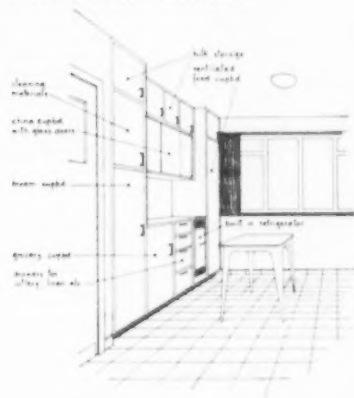


Coronation Kitchen Competition

SPONSORED BY MESSRS.
THOMAS DE LA RUE LTD.

WINNING DESIGN

BY PETER J. BALL, Dip. Arch. (L'Éc.) A.R.I.B.A.
K. G. DINES, Student R.I.B.A.
P. HOWELLS, A.R.I.B.A.



Area of Kitchen 102.5 sq. ft.
Height of Kitchen 8ft 0in.
Height to work top level 3ft 0in.
Height to bulk storage level 6ft 9in.

PLANNING NOTES

The doors are placed at one end so that through circulation in no way interferes with the working of the kitchen.

Window placed to give maximum light to working area, and left-hand light sink and cooker units.

All equipment has been divided into three main groups:

1. Food storage and preparation.
2. Cooking and service.
3. Washing up.

1. 5ft 3in continuous worktop with glazed china cupboard over. Beneath is a grocery cupboard, drawers for cutlery, linen, etc., and an "Electrolux"—built-in gas refrigerator. An electric plug socket is provided on the wall at the back of the worktop. Adjoining the worktop is a ventilated food store on one side and a broom cupboard on the other.

2. A "De La Rue" G.4 gas cooker with worktops on either side. Beneath the worktops are drawers and cupboards for cooking utensils.

3. Stainless steel sink unit with draining board and sink in one continuous surface. A flat worktop is provided on the opposite side of the sink to the draining board. Beneath the sink is a cupboard with a rack for washing-up equipment and a space for a bucket. Beneath the draining board is space for a gas wash boiler.

Over 200 designs were received. The kitchen was erected on the De La Rue stand at the Ideal Home Exhibition.



Finishes

Floor: 9in x 9in composition tiles with 3in coved skirting.

Walls: 2 coats emulsion paint on plaster.

Ceiling: 2 coats emulsion paint on plaster.

Worktops: Buff Linette "Formica" laminated plastic, matt.

Cupboards, doors, window surround: Softwood, primed, 2 undercoats, 1 finished coat gloss paint.

Window Cill: Black glazed tiles.

Curtains and chair seats: Gingham.

Sliding doors to china cupboard: 1/4 plate glass with etched hand grips.



IN PARLIAMENT

Land and Houses

Mr. Higgs asked the Minister of Housing and Local Government, whether he would ensure that development under the Town Development Act, 1952, took place on land which was below average in agricultural quality, rather than on agricultural land which was of average or above average quality. Mr. Macmillan replied that arrangements already existed to ensure that wherever possible good agricultural land was not taken for development. Authorities carrying out town development had to obtain planning permission in the usual way, and there was full consultation with the Ministry of Agriculture.

Mr. Higgs asked him to ensure that where development seemed likely on good land he would use to the full the wide powers available under the Act to search further afield for other sites. Mr. Macmillan said they always tried to keep in balance the two considerations—the need for land, and the need for houses.

Mr. Gower asked the Minister if he would circularize the local authorities encouraging them to build more houses on the sites of demolished properties, and also to resume the clearance of such sites, in order to minimize the loss of agricultural land. Mr. Macmillan replied that he had already urged authorities to make use of every practicable alternative to agricultural land.

Mr. Snow asked if the Minister was satisfied that there was adequate collaboration between his officials and the Land Commissioners and the Ministry of Agriculture. Mr. Macmillan said they did their best, and he would look into the matter again. His officials and those of the Ministry of Agriculture were in very close touch, and a large number of cases were submitted to be decided between the Minister of Agriculture and himself.

On a specific case, Mr. Swingle asked what action the Minister was taking to assist Newcastle-under-Lyme Corporation to acquire more land for housing, so as to prevent a breakdown in their housing programme. Mr. Macmillan answered that he had just received the council's proposals, and would have them examined in consultation with the Ministry of Agriculture. Mr. Swingle pressed the urgency of the matter, as the council only had land for another 12 months use. (March 24.)

Building High

Mr. Gower asked the Minister of Housing and Local Government whether he would circularize local authorities to encourage the erection, by them and by private developers, of more flats, so as to minimize the loss of good agricultural land. Mr. Macmillan repeated that he had already circularized all local authorities on the need for conserving agricultural land. Since he took office, he added

the steel shortage had made it rather difficult to press forward with flats, but he had every hope that more progress could soon be made.

Mr. Gower referred to this as one of the greatest problems that the country must solve. Present development plans round the great cities—for example, Cardiff—must mean the loss of some of the finest land. Mr. Macmillan said they must try to get a proper balance, which was very difficult to do except in general terms, between the needs of housing and the need to preserve good agricultural land.

Mr. Herbert Morrison made the point that it was not desirable for this to become a country of universal flats. Mr. Walker-Smith suggested that it might help to attain the balance if the Minister gave some guidance to local authorities about the appropriate densities they should incorporate in their development plans. Mr. Macmillan said he thought they had given a good deal of guidance in the pamphlets issued generally, and he was not anxious to lay down actual rules. Nobody wanted "universal" flats, but with modern designs and the skill with which houses and flats had been used in mixed development in re-developing the central parts of cities, flats had a very big role to play, and he hoped they would be used to the full.

Mr. Mellish thought that one of the finest ways of overcoming the problem would be for the Ministry to deal with slum clearance as a matter of urgency. Mr. Macmillan agreed, but pointed out that little had been done in this way since the outbreak of the war because of the tremendous pressure of housing needs and the unwillingness of authorities to turn out people who already had houses, however bad. Having got through the peak demand, they were now making such progress with housing in general that they would be able to turn with much greater emphasis to slum clearance. (March 24.)

Costs, Particular and General

Mr. Porter asked the Minister of Works what was the estimated reduction in regard to costings in the building trade in general and housebuilding in particular in the last 12 months. Mr. Eccles said that the cost of building, whether of housing or other types, had changed little in the last 12 months. The wage increase had been offset by a slight decrease in the price of materials and by some improvement in productivity.

Mr. Porter then asked specifically, what reductions had been made in the cost of bricks, timber, light castings and cement used in house-building during the last 12 months. To this Mr. Eccles replied that in the 12 months to February 28, 1953, there were increases in the price of bricks of 3 per cent and of general builders' castings of 4 per cent. These increases were rather more than balanced by decreases of 8 per cent in cement, 8 per cent in

imported hardwood and 10 per cent in imported softwood. (March 24.)

Corresponding Tenders

Mr. Royle asked the Minister of Works, what steps he is taking, pending examination by the Monopolies Commission, to prevent firms from submitting the same tender for steel door frames for council housing estate contracts, and thus creating a price ring. Mr. Eccles said he was not aware that the prices quoted for steel door frames were unreasonable.

Mr. Royle stated that the Salford City Council had invited tenders for steel door frames to serve 48 flats and received five replies all quoting the same figure of £971 15s 9d. Was the Minister prepared, he asked, to take some action to show these firms that he completely disapproved of this method of trading? Mr. Eccles said he was not aware of it but would look into it. What he was aware of was that since the control of prices for these frames was ended last June they had been reduced by 3½ per cent. (March 24.)

CORRESPONDENCE

Electricity v. Gas and Solid Fuel

To the Editor of A. & B.N.

Sir,—In the course of his attack, in your issue of March 19, on the very reasonable article by your contributor, "Dutch Uncle," Mr. C. O. Bretelle says that about two-thirds of the coal used to generate electricity is "near-waste." This is not the view of the Minister of Fuel and Power, who said that all the coals consumed at power stations could be used for other purposes (*Hansard*, May 19, 1952).

Mr. Bretelle suggests that electricity is comparatively guiltless of atmospheric pollution. The last Government report on Fuel Research, discussing sulphur dioxide in London's atmosphere, says: "The heaviest pollution is centred round the generating stations."

Lastly, Mr. Bretelle says that price increases of household coal have led many people to adopt electric heating. In spite of his talk of "near-waste," he has, however, already said that coal is responsible for over 80 per cent of power station costs. Does an increase in the price of flour make people give up home baking and buy more expensive shop cakes?

It may be that atomic energy will one day provide a source of electricity cheap enough for all domestic purposes. Until it does, our objective must be to use coal as efficiently and inexpensively as possible. For continuous room and water heating, that means the use of a modern solid fuel appliance—with gas or electricity for short-term needs.

I am, etc.,

ERIC BELLINGHAM,
Director-General, Coal Utilisation
Council.

EXTENSIONS

TO DINING ROOM,

IMPERIAL HOTEL,

TORQUAY

architect :

C. HOWARD CRANE

THIS new extension at the Imperial Hotel increases the floor area of the dining room by about 70 per cent and is carried out over the existing squash court roof. The main constructional problem was to remove the main wall to the sea side of the existing dining room which obstructed the view of Torbay. Now the only obstructions that remain are the two circular columns formed round the steel stanchions which support the main structure.

Great care had to be exercised in carrying out the needling and strutting because the structure of the dining room wing consists of load-bearing walls with the floor loads transmitted down internal partitions. The hotel is built on a cliff slope and the main wall aperture faces the direction of S.W. gales from the sea.

Construction

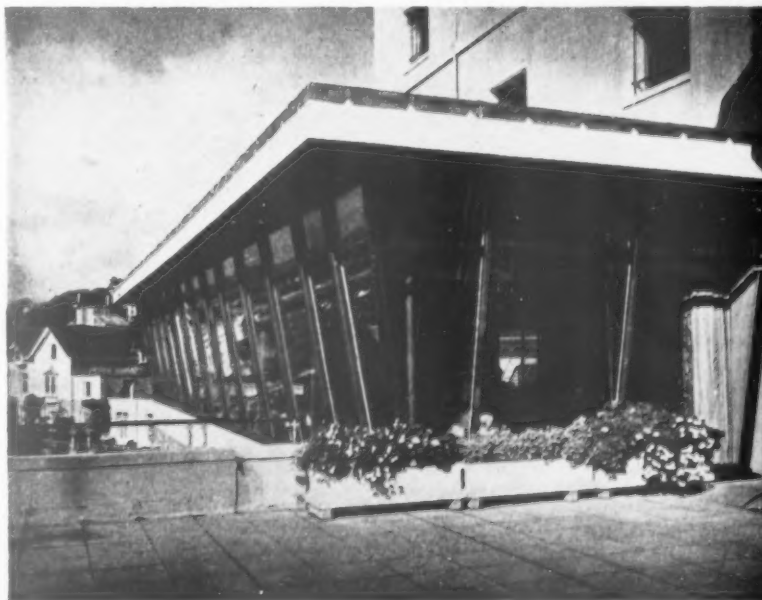
The new extension is constructed of steel frame with 4in steel circular columns to the perimeter. The roof over the extension is constructed of reinforced concrete covered with bituminous built-up felting and is cantilevered over the continuous windows to provide a canopy which gives some protection from the sun's rays. The flat roof covering is laid on "Vermiculite" screeding to provide additional insulation.

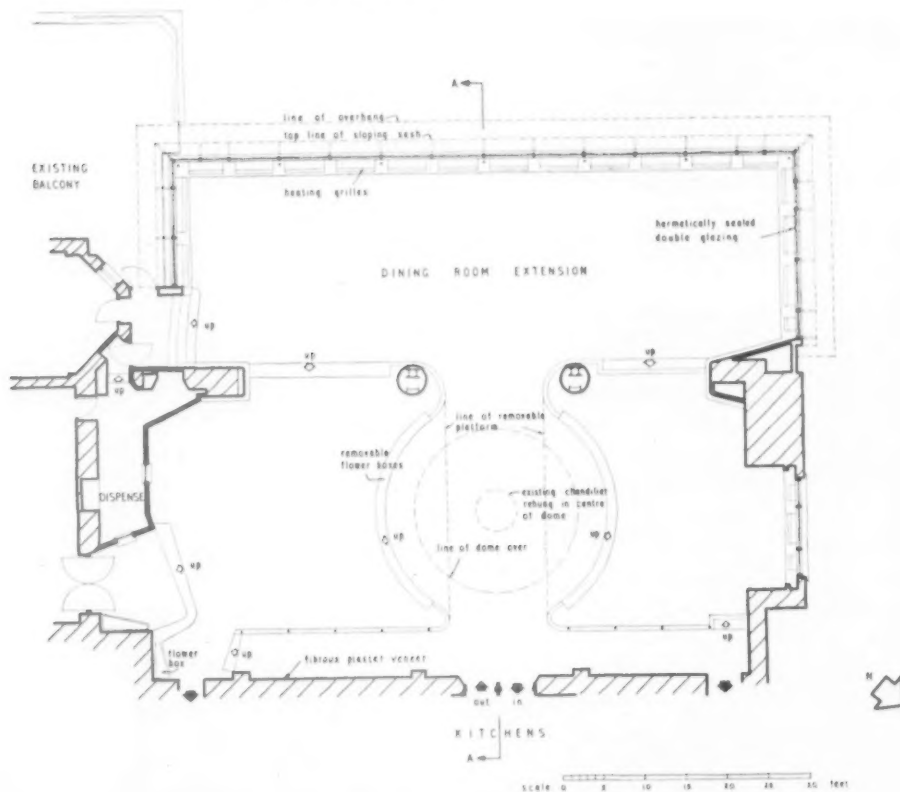
Features of the design are : **Windows :** The new 12ft windows are continuous and lean forward about 80°, providing practically an unobstructed view down and across Torbay. The glass consists of two sheets hermetically sealed for insulation purposes. The window frames externally are covered with bronze providing maximum protection with minimum maintenance. **Terraced Floor :** A circular, hardwood dance-floor has been constructed in the centre of the former and now internal section of the dining-room : at each end of this the floor is raised as terraces to provide diners with a view of



The dining room looking towards Torbay showing decorated fibrous plaster columns hiding steel stanchions. Artist for column decoration : Stefan Knapp.

The leaning windows to the dining room seen from an existing balcony.





General Contractors:
P. W. Wilkins & Son, Ltd.
Curtaining and Carpets:
Williams & Cox (Furnishers), Ltd. *Fibrous Plaster:* Bryan Adamants, Ltd. *Hardwood Flooring:* Horsley Smith & Co. (Hayes), Ltd. *Heating and Ventilation:* G. N. Haden & Sons, Ltd. *Lighting:* Drury & Company. *Lighting Fittings:* Courtney Pope (Electrical), Ltd. *Marble Cills:* Walter W. Jenkins & Co., Ltd. *Ply-felt Roof Covering:* William Briggs & Son, Ltd. *Sound System:* Tannoy & Lewis (Sound Engineers), Ltd. *Structural Steelwork:* Daco Structures, Ltd. *Tile Skirtings and Column Bases:* Semtex, Ltd. *Windows and Timber Work:* Fredk. Sage & Co., Ltd.

The dining room extension. Imperial Hotel, Torquay.



FACTORY AT DOVERCOURT, ESSEX

for the Standard Yeast Co.

designed by: OVE ARUP & PARTNERS

consultant architect: DAVID ABERDEEN assistant: P. HATTON

THIS new factory for the Standard Yeast Co. is an example of close collaboration between Engineer and Architect. The Consulting Engineer determined the site layout which included, apart from the manufacturing areas, all services, offices, laboratory, packing plant etc., necessary to make the factory completely self sufficient. The Architects were then called in to collaborate in the design of the buildings.

Site

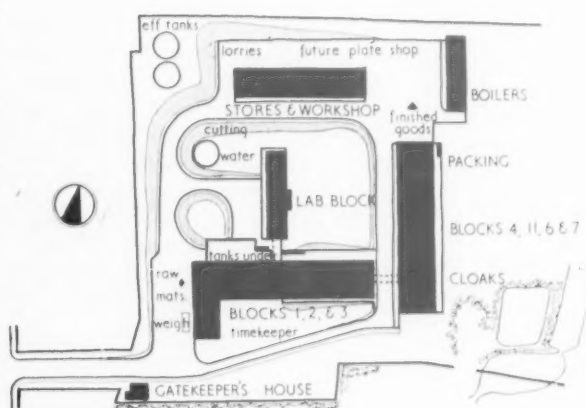
The site, at Dovercourt Bay, near Harwich, on the Stour Estuary, has a clay subsoil and slopes steeply from the South-West at which is the point of access, to the North and East. The site will be fully landscaped.

Plan

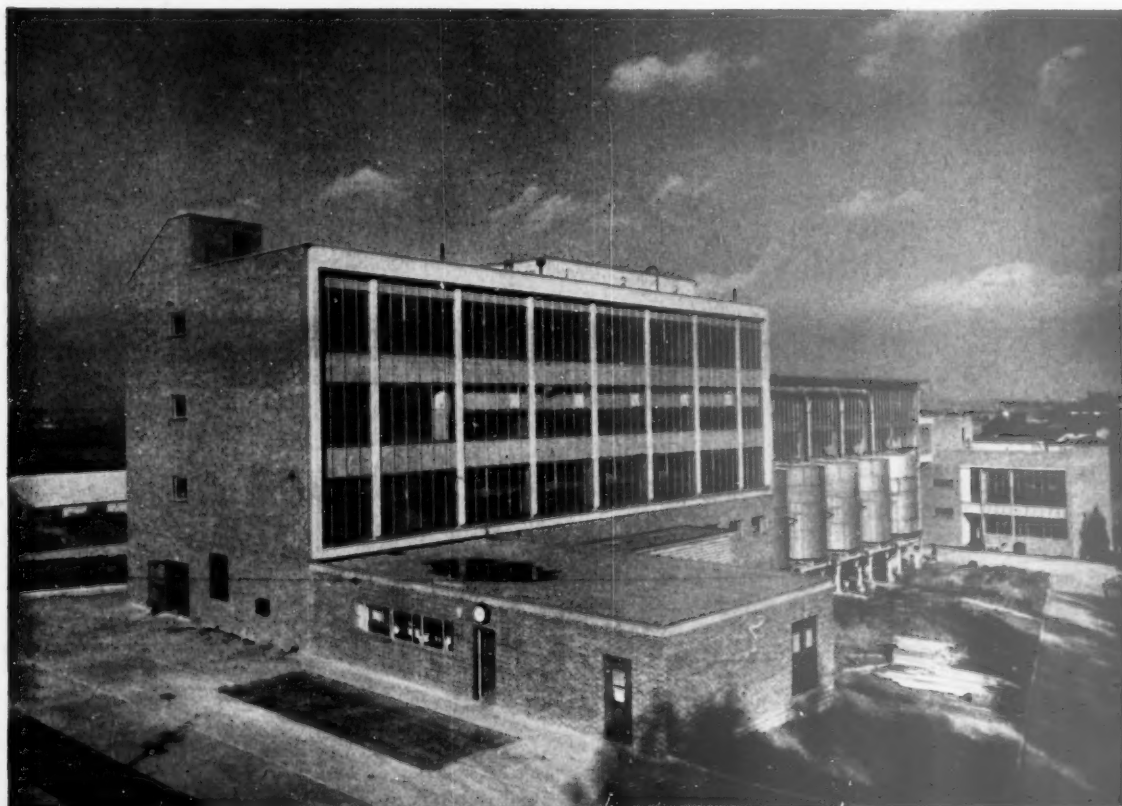
The factory has been designed to accommodate all the manufacturing processes in sequence. The problem resolved into three main blocks inter-connected at first floor level by bridges, which permitted a freer circulation at ground floor level. Blocks 1, 2 and 3 contain the preparation areas, Blocks 4, 7, 6 and 11 the processing

areas, and Block 12 contains the laboratories. Ancillary buildings are disposed around a main ring road and include the boiler house, forge, garages, stores and so on. The entrance to the site is controlled from the gatehouse.

[Continued on page 399]

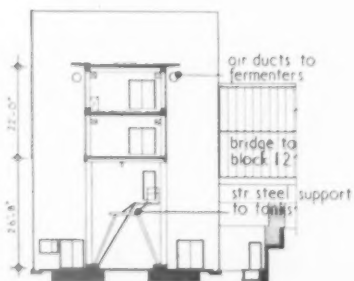
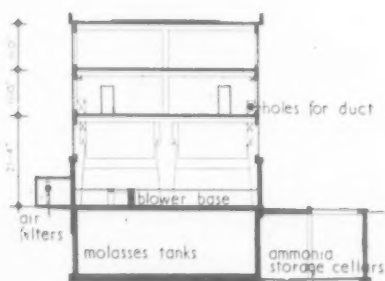
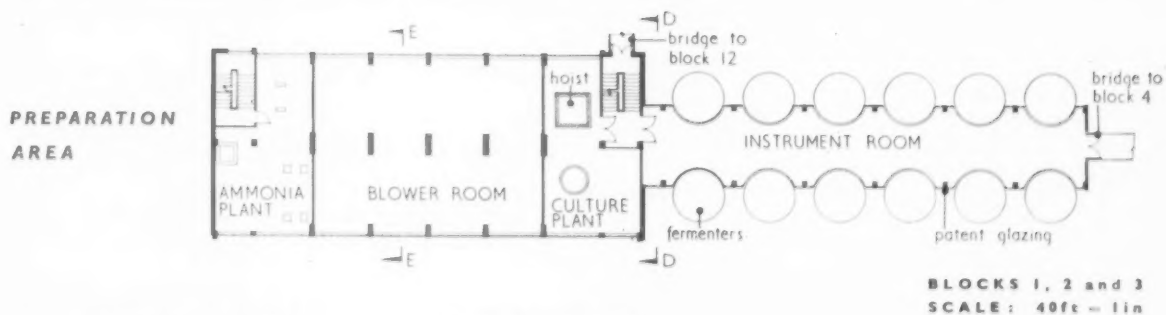


Blocks 1, 2 and 3 viewed from the South. Beyond the stainless steel fermenting tanks the road passes under the bridge which connects with Blocks 4, 6, 7 and 11.

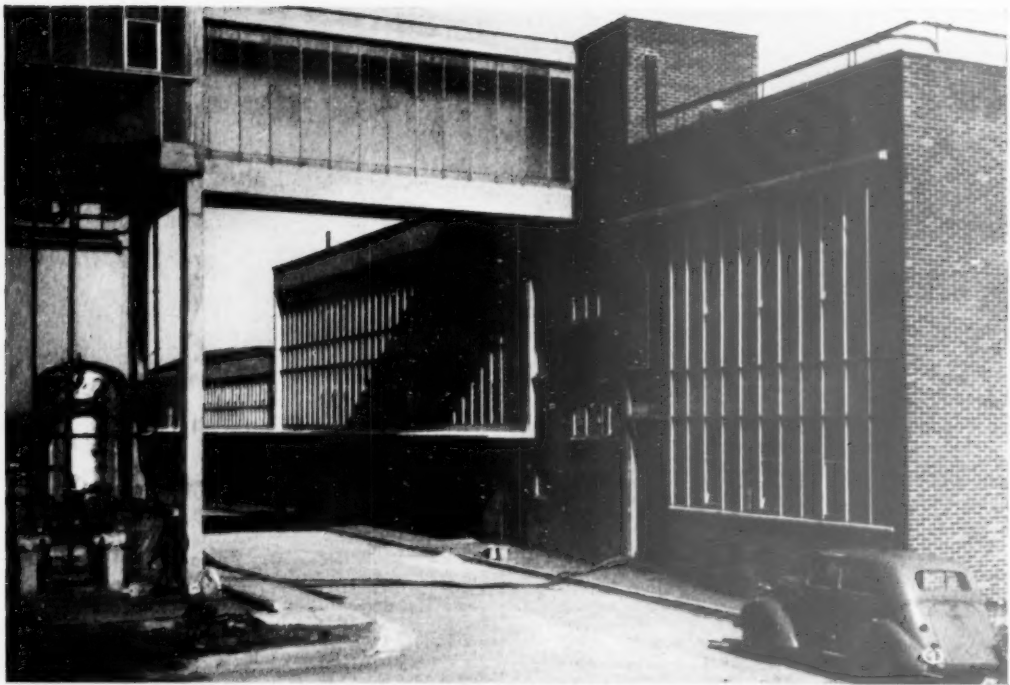




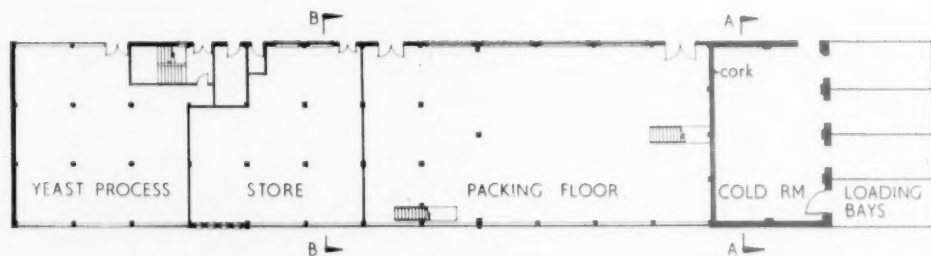
The South-East end of Block 4, part of the Processing Shops.



SECTIONS E and D



Processing area. Blocks 4, 6, 7 and 11 viewed from South.

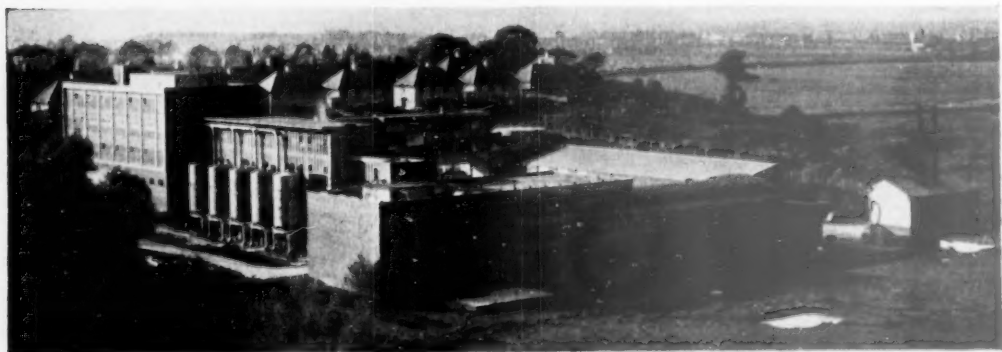


GROUND FLOOR PLAN AND SECTIONS, BLOCKS 4, 6, 7 and 11. SCALE: 40ft=1in

**PROCESSING
AREA**



General view of factory buildings from South-East.



Continued from page 396]

Construction

A reinforced concrete frame has been used with prestressed floors of the newly developed "Shishkoff" units as self centring floor beams; prestressing is by post-tensioning using the Freyssinet system. The Shishkoff, or Plycrete units were first made up on the site by the general contractor in 3ft-4in lengths, and then assembled in 10ft reinforced lengths to span between beams. The units are made up as follows:—A layer of sand and cement mix, approximately $\frac{1}{2}$ in thick, is laid out on kraft paper by a plasterer, two pairs of folding wedges, acting as mandrils, are placed on the prepared layers and the edges folded over to form a "B" section. The twin-box section left when the mandrils were withdrawn provides a strong light unit that is used as permanent shuttering giving the usual "T" section beam formation.

The foundations of the main block are incorporated in the construction of underground tanks for storing molasses. These tanks are lined with welded sheet steel

plates and the lining formed permanent shuttering for the foundation raft and walls. The whole sub-ground-level structure acts as a foundation for the four-storey block.

Floors and roofs of prestressed construction with the exception of a shell concrete barrel vault over the packing section. Exterior walls are of brick and mola block cavity panels to the end elevations and ground floor; elsewhere a patent aluminium glazing system is used as cladding.

Concrete drains were used as permanent shuttering for the r.c. columns.

Finishes

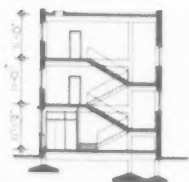
Walls: plastered in offices, fair faced concrete in works. Roof covering: $\frac{3}{4}$ in Asphalt. Ceiling: suspended in the reception room to the laboratory block.

Services

Water is obtained from bore-holes on the site and stored in R.C. tanks. Drainage is by pipe line 1,500ft out into the estuary.

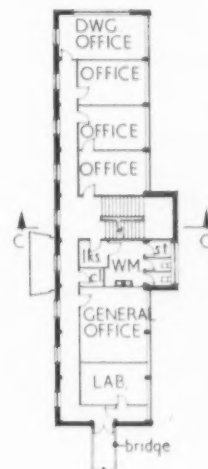


Two views of the Laboratory Block 12



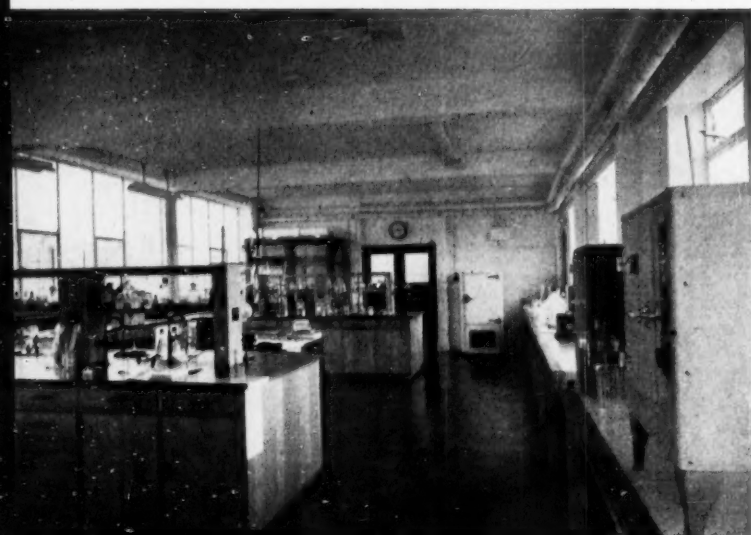
SECTION C, BLOCK 12

1st FLOOR PLAN, BLOCK 12



LABORATORIES





1 A view of the reception room looking towards the entrance the suspended ceiling is finished in Acousti Celotex tiles.

2 An interior view of one of the main Laboratories.

3 Detail of the glazed screen which cuts off the reception room entrance from the staircase.

FACTORY AT DOVERCOURT BAY

Designed by:

Ove Arup & Partners

Consultant Architect:

David Aberdeen

General Contractors:

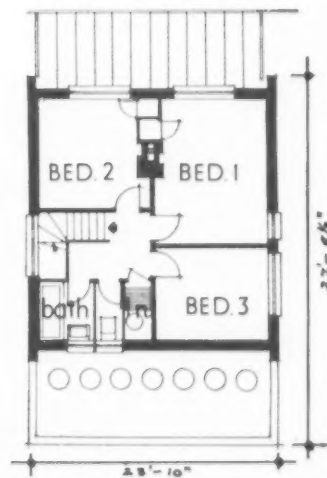
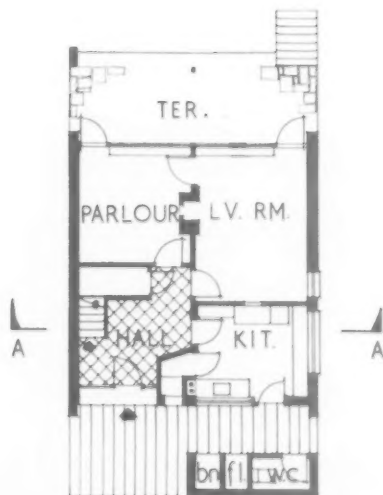
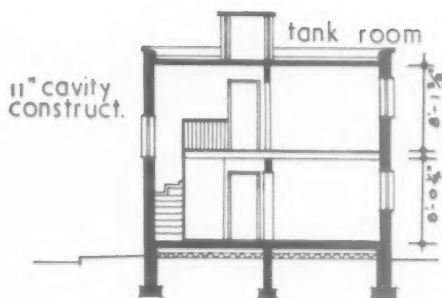
Bovis Ltd.

Acalor Floor Tiling: Acalor (1948) Ltd. Acoustic Tiles: Horace W. Cullum & Co. Ltd. Accotile Flooring: Holmes (Norwich) Ltd. Asbestos Roofing to Boiler House: L. Whittaker & Co. (London) Ltd. Asbestos Roofing to Workshop: Manchester Slate Co. Ltd. Asphalt and Felt Roofing, Asphalt Lining to Water Tanks: Ragusa Asphalt Paving Co. Ltd. Chain Link Fencing: Astolat Co. Ltd. Cold Store Installation: Smiths Insulations Ltd. Cork Flooring: Gabriel, Wade & English Ltd. Driven Piles and work in connection with Effluent Pipeline: J. T. Mackinley & Co. Ltd. Electrical Installation: Carlin Engineering Co. Ltd. Granolithic Paving: Stuarts Granolithic Co. Ltd. Light Weight Concrete Screeds: Meta Mica Ltd. Plastering and Plumbing: Proofs & Partners. Pre-Stressing Equipment: P. S. C. Equipment. P.V.C. Floor Tiling: H. V. Smith & Co. Ltd. Reflex Flooring: L. Fishburn. Roller Shutters, Steel Doors, Balustrading: Haskins. Scaffolding: Scaffolding (Gt. Britain) Ltd. Steel Lining to Molasses Tanks: Structural Steelwork; The English Bridge & Structural Engineering Co. Ltd. Vertical Patent Glazing: British Challenge Glazing Co. Ltd. Window Glazing: Faulkner Greene & Co. Ltd. Windows (Metal) and Roof Glazing: Williams & Williams Ltd.





The Gatekeeper's house showing the East elevation and terrace which is to have a lattice-frame screen enclosure; below is a view from the North-West.



PLANS AND SECTION.

SCALE: $\frac{1}{16}$ " = 1 FT.

In Order to View



THERE are few things so irritating as being baulked in a harmless pursuit by bureaucracy behaving, correctly but unimaginatively, in accordance with its own regulations. This irritation is not lessened by being in the wrong oneself, or (such is human nature) by the offer to make an exception in one's favour. Service, as it were, from under the counter is almost as distasteful to the "haves" as to the "have nots," if one has any sense of fair play.

The Greeks, who "had a sword for it," slew the bearer of bad tidings, probably without waiting to discover whether true or false. There must be a special corner of hell for those who point out, with complete justice, that you can't do that there 'ere—and the more the justice the hotter the corner, one hopes. Whether the order of the day is "Keep Off the Grass" or "Dogs Must Be Led," the reaction is an urge to muddy one's boots by straying from a path along which a dog must specially be acquired in order *not* to lead it.

But forbidden fruit and the grass in the next field are proverbial. The urge to view historically or architecturally interesting buildings is in direct proportion to the firmness with which they are put out of bounds, and becomes a compulsive mania when it is almost too late, and those slatternly caretakers Mother Nature and Father Time have done their fell work.

The difficulty is, of course, in knowing what it is we want to look at before we see it. If it happens to be crouched burials, castles or Capability Brown, we are well catered for. If it is Brighton Baroque, true, we already need an extension of facilities through a Regency, a Victorian and even an Edwardian Group to keep up with the accelerating wheel of fashion. But if our collector's pieces run, let us say, to the eclecticism of Coalbrookdale grids to sewer outfalls on the Wey Navigation Canal there may be complications. It is in fact a rumour that no less than the revered editor himself was refused permission to photograph the elegant decay of briar-grown statuary on the Crystal Palace site—surely a commendable enough ambition—that has touched off the train of thought developed here.

The thing is, then, having pin-pointed your "target" to find out who controls, owns and occupies it; and when and how one can get to see it, at what cost and whether with gun, camera, killing-bottle and sketch-book, or not.

That tomb-chamber of curiously Etruscan conformation but in the frozen fastnesses of the far North that we always wanted to explore, comes we find under the jurisdiction of

the Ministry of Works as a sort of protectorate in a hostile territory, oddly "outwith" the Royal Commission on Ancient Monuments for Scotland. It may be seen by arrangement with the landowner during normal hours, for a fee, on weekdays excluding Hogmanay. Sketching, photography and other Sassenach cantrips are glowered upon, we gather, but tolerated. Twelve-bores are barred.

Let us in imagination make the expedition—by Brit. Railways, steamer and pack-pony. We are delayed by misdirection from a false oracle in a coracle, and on arrival at Ulsa of the Outer Isles, The MacAbre (Laird of the Isle) is moodily swiping at sandwich-wrappings with a notched claymore. His henchman, Phantas McGoria, refuses with hoarse Gaelic oaths our proffered saxepe and indicates by signs that only artefacts dug up on the South Bank are acceptable barter. As for "normal" hours, his eldritch laughter drowns the keening of the seal-women—no hours are normal in this land of Celtic twilight. Sketching in the brume is out of the question; anyway, our pencil was lost during the final assault through breast-high ling, and our camera became wet-plate during the tempestuous crossing. In short, a brogue-less errand, though we now understand the meaning of the word grouse-moor.

This, of course, is pulling the leg and the long bow. In a more sober mood of mild curiosity and vague helpfulness (the mood that gets us into our hottest water) we set out on a telephone tour of enquiry. In the rôle of Devil's Advocate, combining rather-more-than-average interest and cluelessness (the latter not difficult to assume) we approached a representative cross-section of the bodies presumed to be concerned and competent, "official" and otherwise.

To be serious, let it be said at once that we were treated everywhere with unflagging courtesy, patience and helpfulness; hot water was off. If a flippant mask is here used to hide fallen arches, this indicates no ingratitude but merely artistic licence in making a point which we feel to be real, and which will emerge later. If the resulting information is garbled in detail, let this suggest that it could happen to anybody.

The M.H.L.G. compiles, under the Town and Country Planning Act (1947) Sec. 30, lists of buildings of special architectural or historic interest "for the guidance of local planning authorities" . . . i.e., not available to the general public but no doubt accessible for consultation through L.A.'s—if known—in appropriate cases.

M.O.W. publishes, through H.M.S.O., an admirable booklet, found by chance discarded by an affluent G.I. at Hampton Court, called "The History of Britain in Stone," listing some 300 of the 500 buildings under the Ministry's care and ownership. A season ticket is available on attractive terms, admitting two free to those for which a charge is normally made. Illustrated information is concisely tabulated under situation, open hours and price of admission if any. It is, bless it, indexed.

S.P.A.B. owns some buildings, mostly un-monumental and "vernacular," not normally open to the public but to view which it will arrange facilities in appropriate cases; fair enough. Two of its "charges" are scheduled as guest-houses, and surely offer a congenial base for exploration to the antiquarian, being 15-16th Century buildings. Highly deserving to be better known and supported in its work, the Society's privileges are naturally confined to its members.

The Georgian Group, as well as the implicit limitations of its scope, again requires paid membership. For 1953 its programme of outings and visits to Bath, Edinburgh and some dozen notable houses is surely worth the modest subscription, apart from other advantages.

The N.T. will reduce admission charges to many of its properties for parties of students, and may arrange for interior photography—applications judged on their merits, of course. Its List of Properties (free to members; other-

wise on sale) is an eye-opener brought up to date by half-yearly supplements. Membership admits to nearly 100 historic buildings and to private houses not normally open to the public.

This perfunctory and incomplete sampling at least indicates that the information and facilities exist, and that the matter is reassuringly in safe and responsible hands tied only by financial and other practical limitations. But there must be others, and it does suggest some degree of duplication and even overlapping, not to mention the difficulty for the layman in discovering who does what. One almost needs a "Guide to the Guides" as well as to the ruins. More, what seems needful is some centralized and "umbrella" authority issuable in accredited and bona-fide cases, like those enviably reported from the Continent which also serve to identify and vouch for the holder. The Italian Institute of Culture in London, for instance, is understood

to furnish a valid document, if asked, before even the journey to Italy is undertaken. It is not known whether the British Council reciprocates.

Obviously an Open Sesame, admitting anyone free to anything at any time, is undesirable and out of the question, but short of that, surely the fence of red tape surrounding our cultural heritage could be provided with a controllable and clearly indicated turnstile, if only for the sake of the foreign visitor on whom we must to some extent depend for the realization of that heritage as a marketable asset.

If this sounds like a plea for the creation of a new privileged class among ourselves—well, so it is in a way; but a class who have precious few privileges left except to use their own eyes and legs to satisfy their own natural interest in what they are, after all, encouraged to regard as their own property.

BASIL MARRIOTT

EXAMINATIONS IN ARCHITECTURE

By JOHN BRANDON-JONES, F.R.I.B.A.

IT was in 1855 that Alfred Bailey, then-President of the Architectural Association, read a paper in which he proposed a qualifying examination for architects and from that day to this Examinations have been a subject for argument in the profession. The A.A. followed up by sending a Memorial to the R.I.B.A. Council asking for the establishment of the Examination and Diploma.

The enthusiasm for Examinations on the part of the A.A. students of the 1850s was based on the fact that having banded themselves together to study architecture in all its aspects and having devoted much time and labour to study and sketching, they found that their less conscientious or more fortunate rivals were stealing a march by starting in practice on a basis of nepotism. In due course the unscrupulous ones were elected to the Institute on the strength of works which were often designed by ghosts or by anonymous assistants. It is interesting to remember to-day that it was the students and junior members of the profession who asked for the examination one hundred years ago, and that at that time many of the seniors were very reluctant to agree to its introduction.

The first R.I.B.A. Examinations, held in 1863, were voluntary. In 1882 it became obligatory to pass the examination in order to qualify for Associateship, and from then on the examination syllabus began to control the general direction of architectural education. Even after the closing of the Associateship the Fellowship of the R.I.B.A. remained open and it is still possible to become a Fellow without ever having passed an examination. As a protest against this anomaly a small number of senior members of the Institute have chosen to remain Associates although by experience and professional reputation they are well qualified for Fellowship.

In 1892, when the possibility of Registration was being discussed, many of the most able architects of the day were bitterly opposed to the closing of the profession. Norman Shaw and T. G. Jackson edited a collection of essays on the qualification and training of architects, and the authors were unanimous in condemning the examination system as well as the principle of registration. Jackson's own contribution was particularly interesting, he outlined a proposal for a national School of Architecture in which Architects and Builders would work side by side for the first part of the course. A similar system was to be developed years later at the Bauhaus and it has again become topical now that the idea of a closer link between architect and builder has been raised as a result of recent developments in building technique and the difficulties inherent in the present system of completing the design before pricing it.

Norman Shaw admitted that you might test a man's

theoretical knowledge of plumbing and drainage by means of an examination; but, as he pointed out, you would still have no guarantee of his practical knowledge. In any case Shaw believed that it was creative and artistic ability that made a good architect, and he maintained that a man who could conceive a fine building could always get help in working out the more prosaic details. "Let us imagine," said Shaw, "that any great architectural monument, such as St. Paul's, did not exist, but that we had complete drawings of it or a large model; we could, in a short time, find a thousand men who could build it. But where should we find the men who could design it?" "It is men such as Inigo Jones and Christopher Wren that we want; and should we ever have their equals again, our practical pygmies will find, possibly to their astonishment, that the real architect is as great on the scientific side as he is on the artistic."

Shaw and Lethaby considered that it was impossible to test a man's artistic abilities by examination; and, if by examination we mean a design test carried out *en loge* on a given day, they were certainly right. But with the development of the full-time school during the 1920s the case was changed. Observation of a man's performance on a series of designs spread over a period of four or five years does, I believe, give a very fair idea of the sort of show he will be capable of putting up as a designer. It does not show how he will fare as a committee man or filler in of forms or how he will deal with his client's wife or the financial responsibilities of building. If we agree that a portfolio of work done in a school gives the examiner a basis for assessing the candidate's worth as a designer, we still have to test his knowledge of the various other subjects that form a part of the architect's equipment, without which skill in design may be completely useless. If a Degree or Diploma is to be awarded it is necessary to try to obtain proof that the holder of it can perform certain elementary calculations, can write a legible and concise report on an architectural problem, can discuss the history and theory of his art without making an ass of himself in educated company. We must also try to make sure that he knows enough about practical construction and professional procedure to ensure that he does not let his client down, either literally or figuratively. If an Architect condemns his client for life to an inconvenient or extravagant building, the client feels that he has a legitimate grudge against the profession and lets everyone know about it.

Shaw believed that it was only possible to judge an architect by his works and that the only thing to do was to allow anyone who could find a client to put up a building; then, if his work seemed to justify the honour, he might be elected to the R.A. or the R.I.B.A. This meant that the first clients

had to take the risk of backing their own judgment, but they knew what they were doing and they could not complain that a *qualified architect* had let them down if the resulting building proved a failure. It was open to anyone who wanted to play safe to go to a man whose previous work had received the approval of his colleagues as witnessed by his election to the Institute. There is much to be said for Shaw's view, but it is difficult to put back the clock and as we have abandoned the idea of actual practice as the test we must fall back on the examination.

The easiest type of examination to set and mark is one in which every question can be answered yes or no. Only a little more troublesome is the type in which you are asked to name three architects of the eighteenth century and give three examples of the work of each, or the construction paper which asks for a sketch of a dove-tail, a stub-tenon and a tusk-tenon. Unfortunately this sort of paper is as easy to cram for as it is to set and mark. Anyone with a reasonably good memory can work up the necessary knowledge required for a pass after a careful study of past papers. The R.I.B.A. questions are not often at this bottom level but they are not hard to prepare for and an intelligent teacher will have little difficulty in getting a conscientious student through in spite of the fact that he may have very little architectural ability. On the other hand, an examination question that really forces the candidate to think and to put down his own ideas is difficult to devise; the question must be worded with the greatest care, and it is difficult to mark because the examiner must read and weigh the whole of each answer if he is to assess it fairly—he cannot hand over a set of *correct* answers to his wife and let her mark half the papers for him. The student writes his paper and never sees it again, the agony is over in two or three hours; but the wretched examiner has fifty or one hundred papers to read, he covers the same ground over and over again for two or three whole days and often works far into the night, so it is not really surprising if he has a bias towards the old-fashioned type of question.

The simple type of paper is open to the obvious objection that it is to a great extent a test of memory rather than a test of ability or intellect. All experienced examiners are aware of this danger and many attempts have been made to discover a type of question which, without being too hard on the examiner, will give greater encouragement to the thoughtful and ingenious student. For example, in certain subjects it is possible to raise the standard of the questions beyond that which can normally be tackled without reference and to allow the student to take his textbook into the examination room. It would of course be ridiculous to allow reference in an examination of the ordinary type. If the standard is raised and the marking is tightened up it becomes possible to set a paper of a far more realistic kind by allowing the candidate to use any reference that an architect in practice would expect to have at his elbow. This has been tried with satisfactory results in the case of subjects like Theory of Structures; the usual paper in this subject amounts to an arithmetic paper combined with a test of memory for formulae and gives very little clue as to the capacity of the candidate for structural design, though it may test his speed and accuracy as a calculator. There are other papers where reference is not desirable, for instance in Specification and Materials, we do not want a selection of ready made and half understood phrases but a test of common sense and imagination. The examiner is trying to find out whether the candidate can visualize and describe the processes of building, not whether he can reproduce the customary trade jargon. The right type of examination for each subject can only be found by trial and error and the R.I.B.A. cannot be expected to do the experimental work. It is therefore essential that the schools should be given the maximum freedom in setting their examinations and that the Institute should watch and wherever possible bring their own examinations into line with the best practice of the schools.

The recognized schools are in a position to tackle the problems involved in the improvement of examination technique because they can check their results against a personal knowledge of the students concerned, which of course is not possible in the case of an external examining body. The

University Schools have the added advantage of being able to draw upon the experience of other departments and in many cases can call in educational specialists who have made a study of the relationship between teaching and examining methods.

It is important not to lose sight of the fact that the type of question set in the examinations has a profound effect upon the type of education given in the schools. Papers set at the R.I.B.A. are immediately reflected in the work done in the unrecognized schools. A better type of paper will within a year or two produce improved teaching, and vice versa. The small schools are usually controlled by Local Authorities assisted by Advisory Councils and, though some members of these bodies may be architects, few if any of them can be expected to have first hand experience of teaching architecture. They tend to judge the success of their school by the percentage of passes in the R.I.B.A. Examinations rather than by the long-term value of the education provided. The Head of the School and his Staff are therefore continually under the temptation to adopt cramming methods and to play up to any known weaknesses of the examining body. This is an unhealthy state of affairs and it is greatly to the credit of the teachers that the results are as good as they are.

It is not sufficiently realized that, apart from those students lucky enough to be in University Schools, the direction of architectural education is not settled as a matter of high policy but is to a great extent an accidental result of a tradition formed by generations of examiners who happen to be willing to undertake the laborious routine work of setting and marking papers. The Board and its Visitors may recommend what they like and their recommendations will be received with due respect—but, in the smaller schools, the type of next year's lecture course will in fact be settled by reference back to last year's examination paper, and that paper will almost certainly be based on a reshuffle of questions set a year or two earlier. This is true to some extent of many professional examinations, but it is especially marked when, as at the R.I.B.A., the examination syllabus is not defined in detail but consists only of subject headings printed on the back of the form of entry for the examination.

A clearly defined syllabus would mean that the teacher would no longer depend on deducing probable future questions from a study of past papers and might lead to a more constructive approach to teaching, especially if the syllabus could be agreed as a result of a conference between the examiners and representative teachers from the *Un-recognized* schools. A detailed syllabus would also make it possible for examiners to use more imagination in setting questions without reference back to old papers.

It has frequently been suggested that it is only fair that all entrants to the profession should pass through the same door, that there should be one examination for all comers and that it should be set and marked by external examiners. It is insinuated that the recognized schools cheat by setting examinations that are easier than those of the R.I.B.A., or, if the papers themselves are not easier, the standard is lowered by lenient marking or by allowing the use of textbooks. Anyone who has examined for the R.I.B.A. as well as in a recognized school will confirm the fact that the standard in the schools is always as high and sometimes higher than the standard of the external examinations and this is supported by a number of recent cases in which a student who has failed in a school has gone to the R.I.B.A. without further preparation and passed. There are good reasons why the R.I.B.A. should accept a lower standard—it is desperately hard work to prepare for an examination without proper tuition and allowance must be made for the difficulties of the external student, but it should be made impossible for those who have failed in a full-time school to take advantage of concessions made to those who are assumed to have been working under the far harder conditions of night-school or correspondence course.

The standard of attainment expected must be based on the opportunities for learning that have been given to the candidate and unless we are prepared to abolish pupilage as a means of entry we cannot reasonably expect all students to pass at the same level. If a common examination were held it would be the artful pupil who would fail unless the

standard of day-school work was reduced to the level expected of the part-time student. There are many advantages in an office training and I, for one, would be sorry to see the complete abolition of pupilage, but as a preparation for passing examinations it is obviously far less efficient than training in a full-time school. The suggestion that a higher general standard of work would result from making full-time students take the R.I.B.A. Examination at its present level is unjustifiable.

The idea that the R.I.B.A. Examinations are more difficult than those of the recognized schools springs from the fact that there is a higher percentage of fails at the Institute, but a comparison of this kind is completely misleading. To begin with the schools eliminate most of their hopeless cases during the first two years, so that they do not appear before the examiners at all. In addition most schools have a rule that candidates may only make two attempts at an examination and those who fail at the second attempt are turned out to take their chance in the external examinations. The R.I.B.A., on the other hand, sets no limit to the number of shots that a man can take at an examination, there is no preliminary screening and the percentage of fails is swelled by a number of hardy individuals who take the examination year after year, without any methodical preparation, in the vain hope that sooner or later the examiners will set some questions to which they happen to know the answers. If we add to these the throw-outs from the schools it is not hard to see why the external examination produces so many failures, even at a reduced standard.

Another alleged proof that the standard of the recognized school is lower than that of the external examination is the fact that in a number of cases a night-school man has proved a better assistant than a day-school man. Probably he is a better assistant, but this is completely irrelevant to the question of examination standards. If the night-school man is a better detailer and a faster tracer it is because during the

day he has had years of practice in doing the things that an assistant is expected to be able to do. Given the same amount of practice the day-school man will do as well, but he cannot be expected to reach the same standard as an assistant during his first few months in an office, nor should he expect at first to receive the same salary as his office-trained contemporary. He must be willing to take the pay for the work he can actually perform, but after a year or two he will catch up and in most cases pass his less-fortunate competitor.

So far I have been writing of examinations as tests, but they also have important educational functions of a more positive kind. For the lone student they are a stimulus and help him to concentrate on his studies by putting him into competition with others and by giving him a standard against which to measure his progress. For the student in a school the competitive side is far less important, but the examination is a very useful part of the training. It is necessary for any architect to acquire the art of summing up and writing down his opinions, in an orderly manner and within a limited time. As practice for drafting reports to clients and committees and as a general training in expressing ideas precisely on paper an examination or test paper has great value. It is also a good thing for a student to have to rely from time to time entirely upon himself and the knowledge stored in his own head. It is very useful to cultivate self reliance as well as to acquire a habit of working with and learning from other people. Whether we call them examinations or not it is especially important that, in a school where normally there is a considerable amount of co-operation and consultation between students, exercises should be set from time to time in which a man is forced to make decisions on his own responsibility. An examiner who sets his questions conscientiously and with imagination can do much to help his pupils to crystallize their ideas while composing their answers.

Air Terminus

MANCHESTER ROYAL EXCHANGE

CITY ARCHITECT: LEONARD C. HOWITT

B.Arch., Dip.T.P., D.P.A., F.R.I.B.A., M.T.P.I.

CHIEF ASSISTANT ARCHITECT: J. S. MARSH

Dip.T.P., A.R.I.B.A., A.M.T.P.I.

SENIOR ASSISTANT ARCHITECT:

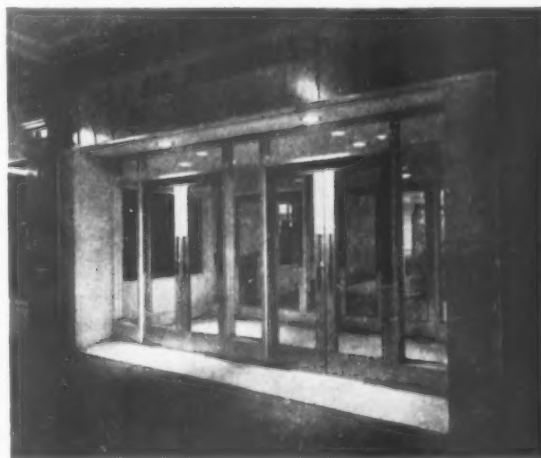
G. BARDSLEY, Dip.Arch., A.R.I.B.A.

SINCE the conclusion of the war the Manchester Air Terminus has been accommodated in a former R.A.F. hut which the City Architect's Department erected on a bombed site adjoining St. Peter's Square and adapted to suit the requirements of the airline operators.

Traffic at Ringway Airport expanded and continues to expand at such a great rate that this temporary building very soon became inadequate. The search for more suitable premises was not rewarded until the end of 1951, when the Corporation began negotiations to obtain a lease of large ground floor space in the Royal Exchange, which became available by the closing of the famous Manchester Limited Restaurant. The premises were acquired and adapted by the Corporation, but all costs will be met by the Operators.

The layout of the new Air Terminus is the result of collaboration between the City Architect and British European Airways Corporation and other interested Air Line Companies. The internal treatment of the former restaurant, which was designed by Messrs. Bradshaw, Gass and Hope, F.R.I.B.A., the architects of the Royal Exchange Extension, has been retained in the interests of economy.

The site, which is in the heart of the city, has street



Public entrance in Royal Exchange Arcade

frontages to Cross Street and St. Ann's Square, and a continuous frontage to a shopping arcade which connects the two thoroughfares.

The Corporation undertook to convert the premises to provide:—

1. Passenger handling facilities.
2. B.E.A. administration and sales accommodation.
3. Other airline companies' administration and sales accommodation.
4. Storage, toilets and ancillary accommodation.

The adaptation was effected to the designs of the City Architect, Mr. Leonard C. Howitt, B.Arch., Dip.T.P., D.P.A., F.R.I.B.A., M.T.P.I.; Mr. M. W. Blomfield, of the Property Branch of British European Airways, collaborated in the preparation of the scheme. The alterations, including the electrical installation, were carried out by the City Architect's Works Department; the heating specialists were Robert Heyworth & Co., Ltd., Manchester, and the ventilation installation was undertaken by Ezra Hatton & Co., Manchester. Work was commenced on May 5, 1952, and the Terminus was opened by the Minister of Transport and Civil Aviation, the Rt. Honourable A. T. Lennox-Boyd, M.P., on Friday, October 17, 1952. The estimated cost was £33,925, and the actual cost a little below this figure. The total floor area is 17,786 sq. ft.

The following is a detailed description of the Air Terminus.

1. Passenger Handling Accommodation

(a) Passenger circulation.

The main entrance is situated half-way along the Royal Exchange arcade. Two pairs of double doors lead into a small vestibule, beyond which is the passenger entrance hall. A flight of steps down connects the latter with the main concourse which occupies most of the main floor of the original Manchester Limited Restaurant. The direction of circulation for outward bound passengers is along the length of the concourse towards the outward lounge at the St. Ann's Square end of the building.

The effective average width of the concourse is 25ft. Passengers proceed either directly to the outward lounge, or visit one of three passenger handling counters which are placed along one side of the concourse. On the opposite side of the concourse is a newspaper kiosk. The outward lounge is approached from a flight of steps up to a wide landing which extends across the width of the concourse; on one wing of this landing are three telephone kiosks for public use. There will eventually be access from this landing to a future snack bar and restaurant.

The floor in the concourse is polished oak blocks. The walls and ceiling are painted in milk white, the object being to give an effect of spaciousness to an area entirely dependent on artificial lighting, to provide a neutral background for the brightly coloured furnishing and advertisement displays and to avoid emphasis of the liberal enrichments of the walls and ceiling which existed before the adaptations. The illumination is by twenty-four louvred fluorescent units placed in all the existing ceiling coffers. The B.E.A. processing counters and desk for the public address system are all finished in polished oak.

The outward lounge has a vestibule and three sets of doors opening on to St. Ann's Square, which is the loading point for the airport buses. In this lounge is a door to a baggage lock-up store, and there are also two staircases down to the basement where toilet accommodation for male and female passengers is situated.

Thermoplastic tiles are used on the floor and above the existing polished oak dado the walls and ceilings are painted to match the concourse.

(b) Baggage Handling.

Passengers using the baggage counters in the concourse area have their heavy baggage taken from them. This is stored either in the baggage compound behind the counter, or taken downstairs to the B.E.A. storage room. The baggage is loaded on to trolleys in the baggage compound and then wheeled down a corridor to the Royal Exchange Arcade at the end of which the airport buses wait.

2. B.E.A.—Administration and Sales Accommodation

The area facing Cross Street is taken up by B.E.A. There is a Staff entrance in the Royal Exchange Arcade, which leads into a hall in which there is a staircase down to the Staff toilets in the basement. Beyond this hall is a landing and a flight of steps down to the Cross Street end of the concourse, and also access to the B.E.A. Administrative area. The latter has space allocated for teleprinters and an

office suite for the B.E.A. Manager. There is a display area in the Cross Street windows which is communal to all Air Line Companies concerned with the terminus. Two B.E.A. Booking Offices are connected to the Administrative area; one is for U.K. bookings and the entrance to this office is off Cross Street; the other office is for all other B.E.A. bookings and the entrance is in the Royal Exchange Arcade.

Two further B.E.A. Offices, one of which is for space control, are provided at concourse level, and they are enclosed by semi-glazed screens; this is a temporary provision and eventually they will be moved elsewhere and the area added to the concourse.

3. Other Air line Companies—Administration and Sales Accommodation provided for:—

(a) Air France. (b) Swissair. (c) S.A.B.E.N.A. (d) B.O.A.C. (e) B.E.A. (Aer Lingus).

4. Public Toilets

Further public toilet accommodation for males and females is provided in the basement at the Cross Street end of the building, and is reached from an existing staircase at this end of the concourse.

(b) Staff Toilet, etc., accommodation.

This is adjacent to the public toilets in the basement, and comprises male staff cloakroom and toilet, porters' room and communal tea area.

An emergency escape ladder is provided from the porters' room to ground floor level.

The female staff toilet and cloak-rest room is also in the basement, but is approached from a flight of steps and passage between the office of Air France and Swissair on the concourse.

(c) Public Address System.

A control desk is provided for the public address system in a central position in the concourse. This system has been provided by B.E.A.

Heating.

Heating is by a new low-pressure hot-water system which is connected by a calorifier to the steam supply from the Manchester Royal Exchange Boiler House.

Ventilation.

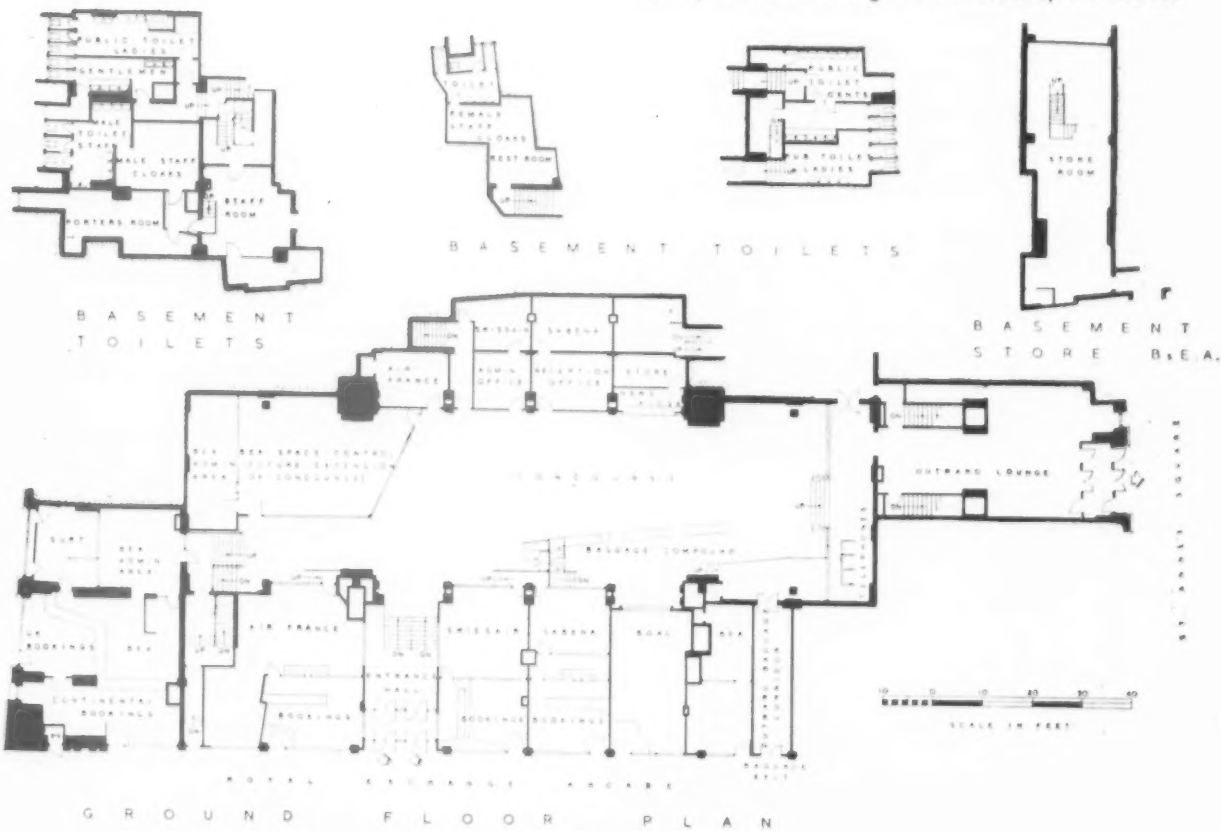
Fresh air is brought into the building from an intake duct, and it is passed through a viscous oil filter and also through a heating battery in cold weather. The conditioned air is then distributed by ducts to all parts of the scheme. A separate system of grilles and ducts is used for the extraction of vitiated air.



Typical treatment of Air Line booking offices in arcade



View of Concourse looking in the direction of Cross Street



SHEFFIELD VICTORIA

Proposed construction of new platform canopy

J. I. CAMPBELL. M.I.C.E.

Civil Engineer to the Eastern Region
of British Railways

On Monday, September 24, 1951, the roof spanning the main line platforms at Sheffield Victoria railway station started to give way. Four trusses at the Western end collapsed, the failure being traced to a concealed fracture in the cast iron ridge piece of one of the trusses, presumably caused by blast from bombs dropped nearby during the war.

As a result of a detailed investigation a decision was made to dismantle the whole structure. Temporary awnings over the platforms have been provided and consist of a framework of standard tubular scaffolding 2 inches nominal diameter with a covering of Big Six Asbestos cement corrugated sheeting. The work of demolishing the old roof and the provision of the temporary awnings was completed early in 1952.

A number of alternative designs for the permanent covering were given very careful consideration and the design adopted is one which incorporates prestressed concrete beams spanning between the existing walls and carrying over the platforms fully glazed suspended awnings of light construction.

The prestressed beams weigh approximately $12\frac{1}{4}$ tons each and are located generally at 25ft centres. The overall length is 87ft 9in, the depth of the section being 1ft 9in at the ends and 3ft 3in at mid span. The concrete is prestressed with 0.276inch diameter high-tensile steel wire in two 16-wire Magnel Blaton type straight cables. Sockets are cast into the beam to take the steel suspension rods.

The steel framework of the awnings consists of arched ribs, purlins and facia. The arched ribs are 9in x 4in R.S.J.s about 25ft 6in long over the Down platform and about 23ft long over the Up platform. Each rib is suspended directly below the prestressed beam by four hangers made from $1\frac{1}{2}$ in diameter rods, screwed into the beam sockets. The length of each

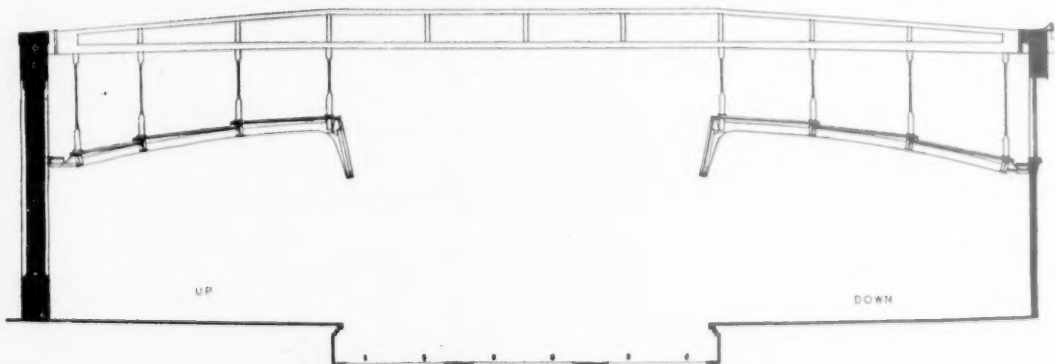


Temporary awning of tubular steel

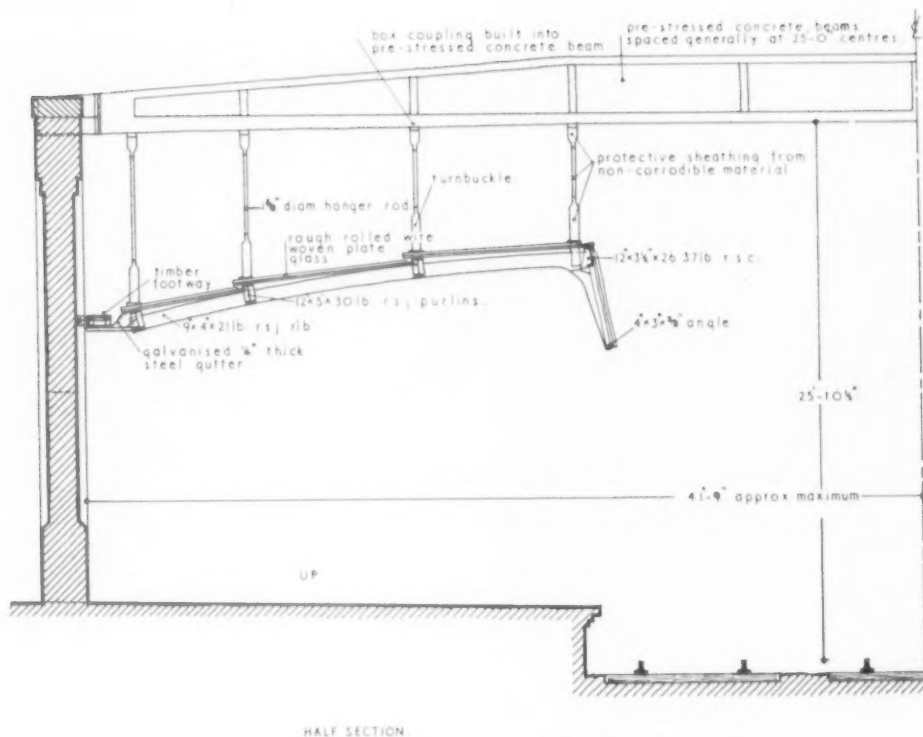
hanger can be adjusted by means of a turnbuckle and any movement of the awning due to temperature change is provided for by fork coupling at each end of the rod. The suspension members are protected by non-corrodible sheathing.

The purlins are of 12in x 5in R.S.J.s spaced at about 8ft 3in centres. The facia, which is 5ft deep and inclined at a slope of 1 in 5, has a 4in x 3in x $\frac{3}{8}$ in angle as a continuous bottom member, the corresponding top member consisting of a 12in x 3 $\frac{1}{2}$ in channel with its lower leg stiffened by a 4 $\frac{1}{2}$ in x 1 $\frac{1}{2}$ in x $\frac{5}{8}$ in bent plate. The facia is framed by three intermediate systems of bracing per bay of 25ft. All connections, steel to steel, will be made by welding.

A parcels bridge, spanning the platforms and tracks divides each awning into lengths of approximately



Key Section. Scale: One inch represents fourteen feet.



Constructional Detail. Scale: One inch represents eight feet

211 feet and 177 feet. The two centre ribs in each length are built into the wall and in order that movement due to expansion will take place towards both ends of each length, the ends of the remaining ribs are linked to built-in 3 in x 3 in x $\frac{3}{4}$ in tees. Galvanized steel gutters are supported by tee sections welded to the inner purlins.

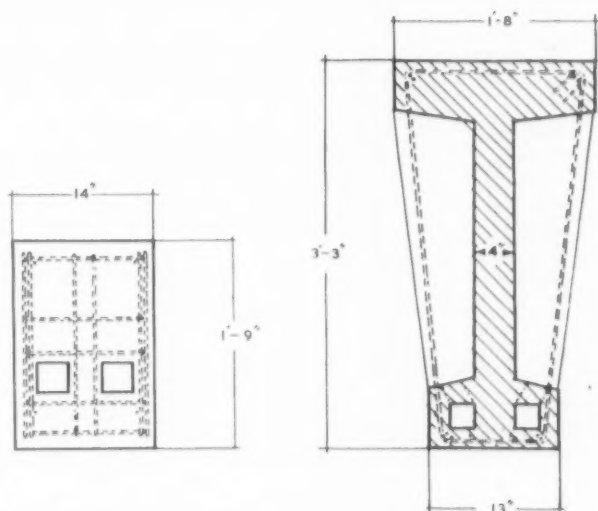
The awnings including the fascia are completely covered with patent glazing consisting of $\frac{1}{4}$ in thick rough-rolled wire-woven plate glass supported on extruded aluminium alloy section glazing bars, bolted to the steel framework.

When electrification of the lines takes place the overhead electrical equipment will be suspended from certain of the prestressed beams which have been designed to take the additional load.

The principal advantages of the design as adopted are the ease of maintenance generally and the freedom from column supports on the platforms.

The design of the new roof was carried out under the supervision of Mr. J. I. Campbell, M.I.C.E., the Civil Engineer of the Eastern Region of British Railways, and the contract has been let to Samuel Butler & Company Limited, Stanningley, Nr. Leeds. The Contractors concerned with the work of demolition and erection of temporary roofing were as follows:—

Demolition of the old roof: Messrs. Samuel Butler & Co., Ltd., Albion Works, Stanningley, Nr. Leeds. Provision and erection of tubular scaffolding: Messrs. Mills Scaffold Co., Ltd., Trussley Works, Hammersmith Grove, London, W.6. Provision and erection of asbestos sheeting: Messrs. Boddy Roofing Co., Ltd., 81 Essex Road, London, N.1.



One sixteenth full size details of post-tensioned pre-stressed R.C. beam. On the left is the end elevation of the beam. On the right is a section at mid-span. Note the cable ducts to take 16 x 0.276 in diameter wire cables.

BUILDING RESEARCH STATION

Note on the Repair and Renovation of Flood Damaged Buildings

THIS note is intended for the guidance of those architects, surveyors, builders and decorators who have to undertake the repair of buildings that have been damaged by flooding with sea-water. It is concerned primarily with the more traditional methods of construction, brick and timber, concrete, etc. It is not possible to include in this note specific advice relating to the many other kinds of buildings that exist, because of the wide variety. Some guidance for dealing with these may, however, be obtained from statements made in this note, as the general principles apply with equal force to all kinds of buildings. The items that will be dealt with here are: (1) Cleaning and drying; (2) Renovation of interiors (3) Structural damage; (4) Effects of sea-water and salt on materials; (5) The use of flooded stocks of building materials.

(1) Cleaning and Drying

(a) *Cleaning*.—Apart from normal cleaning up of mud and sand, much of which may have already been completed, the important item so far as structural features are concerned, is to ensure that any earth or sand that has accumulated against the brickwork above the damp-proof course level is cleared away as soon as possible. Instances have been seen where only the ventilators have been exposed still leaving earth against the wall above damp-proof course level. This earth will hinder the drying of the walls and every effort should be made to remove it at the earliest opportunity. Any deposits that have found their way under boarded floors should also be removed if practicable. Spraying with a disinfectant has been recommended by health authorities and has, in fact, been done in some places. In general, the Local Authorities should be consulted individually as to their requirements in this connection.

(b) *Drying*. When all cleaning down has been completed, and this should include exposed metal work so as to remove salt from its surface, every opportunity should be taken for ventilating the structure, particularly in fine weather. Porous building materials will have absorbed very large quantities of water during the flooding. In brickwork, for example, may have absorbed as much as 10 gallons for every square yard immersed in water. This water may take weeks or even months to dry out. As drying proceeds some of the salt from the sea-water will appear on the surface of brickwork, plaster-work, etc., as an efflorescence taking the form of fluffy crystals or a white powder. However, not all the salt will come to the surface in this way. Some will remain and in humid weather will absorb moisture from the air causing a certain degree of dampness in the wall. In dry weather this moisture will dry out and a further deposit of salts will be left on the surface. Removal of this deposit from time to time will slowly reduce the amount of salt in the wall, but there is little hope that all the salt will be eliminated.

Many of the measures that should be taken to encourage drying will have already been adopted, but the following list may be found useful as a check:—

- (1) Keep windows and doors open as much as possible even when a fire is lit.
- (2) Take up linoleum, carpets.
- (3) Strip wallpaper.
- (4) Lift up floor boards here and there to increase the draught under the floor.
- (5) See that under-floor air bricks are cleared.
- (6) Keep furniture away from walls and remove pictures from the walls; they slow down drying out.

(2) Renovation of Interiors

The provision of a satisfactory interior finish on walls that have been immersed in sea-water is likely to be the major task in renovation, for the salts which cannot be removed will remain a source of trouble.

Measures to give a satisfactory decorated surface will depend on the form of wall construction. Walls of timber frame carrying an internal lining can be repaired by merely replacing the existing lining. For solid or cavity walls constructed of bricks, blocks or concrete, there are several methods that may be adopted, the choice depending on the severity of the circumstances. The surest treatment is the erection of a lining out of contact with the existing wall surface. This treatment has two advantages over all the others: (i) it keeps the decoration away from the salt, and (ii) it can be undertaken without waiting for the wall to dry out thoroughly. Details of this lining treatment which will, no doubt, be familiar to many builders in the areas

that have been affected, are given below together with particulars of the other methods.

Lining treatment for brickwork, etc.—Remove plaster and skirting boards and, if necessary, picture rails, and plug the walls with wooden plugs. Fix battens to the plugs placing a strip of bitumen felt between the wall and the battens. The thickness of the battens should be selected according to circumstances, taking account of the thickness of the original plaster. Cover the battens with the board lining. Both plugs and battens should be made from timber that has been pressure impregnated with an inodorous non-staining preservative. Timber treated in this way is now available from many timber merchants at roughly 10 per cent above the normal price. Of the more common building boards, plasterboard may be decorated direct or given a skim coat of board plaster before decoration; fibre insulating boards should be plastered (B.R.S. Digest No. 10) hardboard, which may be advantageous because it is thinner than other types of board, may also be used and can be decorated direct. A special primer is needed for painting hardboards (see British Standard Codes of Practice CP.231, Painting) but whatever type of board is used a porous decoration is preferable so as to allow the moisture still in the wall to dry out. There are other types of board that may be used successfully, including resin bonded wood chip boards, resin bonded paper boards and wood wool slabs.

Careful attention to detail is needed at all openings—windows and doors, and in some circumstances, e.g., at window reveals, it may be necessary to adopt one or other of the methods described later.

Existing battens should be painted on the front surface before fixing a new board lining.

Clearly it is unnecessary to carry the lining treatment more than a little way, about 1ft, above the level at which flooding occurred. Many houses have been flooded to a maximum of 2ft or less. In these circumstances, particularly where there has been only a few inches of water, there may be some difficulty in obtaining a satisfactory junction with the unaffected plaster-work, and if so it may be advantageous to use one or other of the methods described below. These methods may also be useful when, for one reason or another, battening out is inappropriate. However, the decision to use any particular method can only be taken on the spot after due consideration of all factors.

Alternative Treatments

(i) Sound plaster can be covered with aluminium foil stuck on with bitumen or a pitch-rubber composition. The foil will prevent salt from reaching subsequent decorative coatings but care must be taken to see that the whole of the surface of the foil is protected by the adhesive to prevent corrosion of the metal by salts. Where only part of the wall is affected by salt the foil treatment should be taken 12 inches above the limit of contamination. If the foil surface is to be distempered, it should be rubbed down with fine emery cloth and a coat of sharp colour, free from lead, should be applied. Alternatively an etching primer may be used. This treatment should not be applied to an internal wall that requires treatment on both sides until at least one summer has elapsed, otherwise a large quantity of water will be entrapped. For the drying out period, the surface may be decorated with an emulsion paint or distemper.

Waterproof paper may be used as an alternative to aluminium foil using either a bituminous adhesive or a waterproof (casein) glue. It can be decorated with wallpaper or with a paint into which bitumen is not likely to bleed, e.g., polyvinyl acetate emulsion paint.

(ii) Where the plaster is not in good condition and battening out is not appropriate, it would be best to let the wall dry out for as long as possible, then to remove the plaster, raking out joints to give a key, and finally to replaster in a dense 1:3 cement rendering with an integral waterproofer incorporated. Where a smooth finish is not required, the surface of this rendering can be decorated direct with alkali-resistant emulsion or other paint. If a finishing coat is required, the undercoat should be well scratched to give a good key; neat gypsum plaster should be used in preference to gauged lime finishes.

(iii) An alternative which has not been tried, but may give good results is to remove all the affected plaster and then to fix aluminium-foil backed-plasterboard direct to rot-proofed plugs in the wall. The foil side, which goes against the wall, should be painted with bitumen before fixing, in order to protect it from corrosion. The front face of the plugs could also with advantage



Architect: Frank Mellor, Esq., F.R.I.B.A., City Architect, Portsmouth. Contractor: Kirk & Kirk Ltd., Putney, S.W.19.
Plastering Sub-contractor: Alan Milne Ltd., London.

Annexe to PORTSMOUTH TECHNICAL COLLEGE

On this contract extensive use has been made of "Pharaoh" Gypsum Plasters. "Pharaoh" Gypsum Plasters are perfect for rapid construction, providing surfaces which are fire resisting, non-cracking and which do not give rise to condensation. Drying out is very quick and decoration can follow immediately. "Pharaoh" Gypsum



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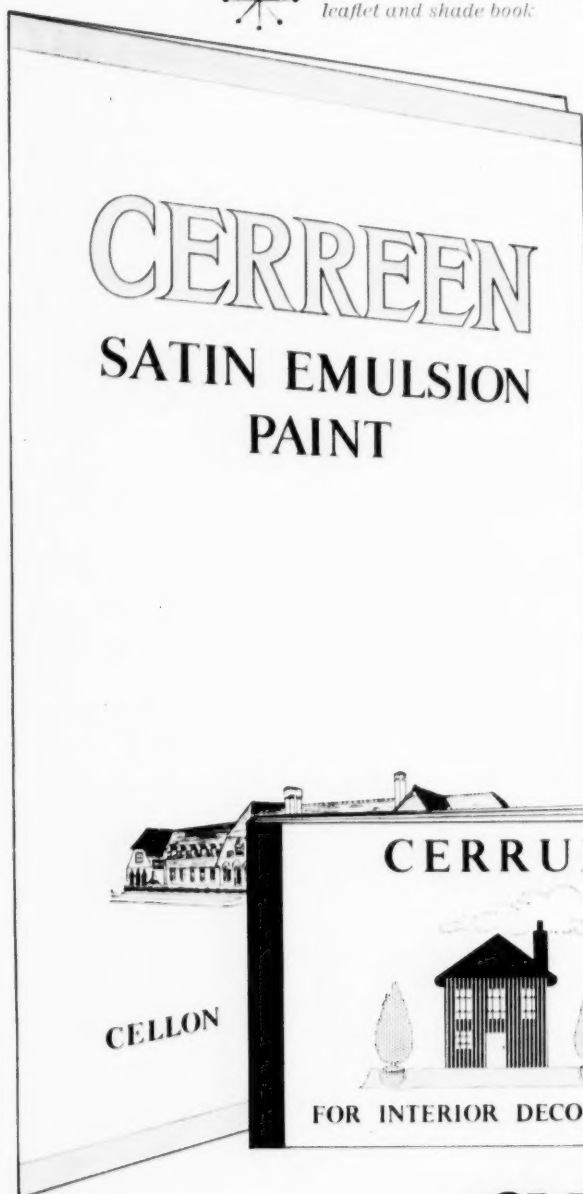
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- * Requires no primer (except on metal) and no undercoat.
- * Ready mixed—easy to apply.
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be given a coat of bitumen after fixing. A single coat of gypsum plaster applied to the board will bring the surface level with existing plaster. Once again, the board should extend 12 inches beyond the limit of contamination. As in treatment (i), care should be taken not to entrap large quantities of water in the wall.

(iv) Another possible treatment is to paint the surface with two or three coats of either a pitch rubber or bitumen-rubber composition or bitumen emulsion. The last coat is blinded with sand while still wet and after twenty-four hours, a single coat of gypsum plaster is applied. Preferably polyvinyl acetate emulsion paint should be used for decoration as it is less susceptible to bleeding of bitumen or pitch. There is little experience of this treatment in these conditions but it may be useful on existing sound surfaces where there is room only for a single coat of plaster. As with treatment (i) it should not be applied to both sides of a wall until thoroughly dried out.

In some circumstances the necessity for immediate decoration of existing surfaces will arise. It is useless to apply impermeable paints on affected parts. They will blister and be affected by efflorescence. A distemper or a flat porous emulsion paint should be used though even with these permanent results should not be expected, and unless there are urgent reasons for redecoration the work should not be attempted.

In those cases where it is decided to apply decoration direct to existing surfaces it is advisable to brush the walls first with a fungicidal solution of Shirilan NA or Santobrite, used in the proportion of 1 lb to 10 gallons of water. The manufacturer's instructions should be closely followed.

Their use involves no serious risk to the operatives engaged, but due care should be taken to avoid prolonged contact of the liquids with the skin—individual susceptibility varies in this respect—and to avoid splashing the solutions into the eyes.

(3) Structural Damage

Structural damage to buildings which were severely buffeted by wind and water will be readily obvious. It is unlikely that structural defects calling for immediate attention will arise simply as the result of immersion in sea-water. There will be long-term effects such as surface powdering and flaking of soft brickwork, possibly some types of stone, and corrosion of metals, though the corrosion of exposed metal can be reduced by proper treatment. These items are discussed further under the heading "Effects of sea, water and salt on materials."

Foundations. Experience with previous floods suggests that if no structural damage was done to foundations at the time of flooding, foundation troubles are not likely to result specifically from the drying out of the flooded ground. The effects of erosion and scouring will usually be obvious and then, of course, remedial measures will be needed. In many of these cases the damage will usually be complex and not be limited to the foundations. The damage must be considered as a whole in deciding what measures should be taken, and the ultimate decision can only be taken by a qualified expert after a full inspection.

Walls. Structural damage by floods to walls is similar in many respects to bomb damage. Walls may be cracked, pushed out of vertical, or partially or wholly collapsed; the recommendations given in certain of the notes issued by this Station in connection with repair of buildings damaged by bombing are, therefore, appropriate; in particular, Note No. 12, "Repairs to Brickwork," would be of value where brick buildings have been affected. This note is now out of print but neostyled copies of the relevant portions may be obtained on application to the Building Research Station. In dealing with damaged brickwork especially in houses, it should be remembered that the factor of safety of brickwork is so great that minor cracking can be neglected and much unnecessary demolition and repair can be avoided if this factor is taken into account. Many bomb damaged houses that had suffered a certain amount of cracking were successfully repaired.

Floors and roofs. In general, structural damage to floors and roofs will have occurred only when there has been serious damage to supporting structures.

In both these cases, the remarks made in connection with foundations apply and specific advice cannot be given in a general note of this kind.

(4) Effect of Sea Salt on Materials

The effect of salt on materials must always be borne in mind whenever repairs are undertaken. All porous materials such as brick, stone, concrete and plaster will be impregnated with the salt and, as already stated, when these dry some of the salt will appear as a white powder on the surface. This should be brushed off dry, collected, and disposed of. The salt that remains in the wall is the main cause of difficulties in renovation.

The effect of salt on some of the more common materials used in building can be summarized as follows:—

(i) Brickwork

As noted above, most brickwork soaked with sea-water will show efflorescence. This should be removed from time to time, as recommended above, but the repeated crystallization of salts will often lead to powdering or flaking of the surface of the bricks and of the mortar joints. This is a slow process and will not cause immediate difficulties. Unless the deterioration becomes extensive, it will not be necessary to do anything more than brush off the salt from time to time. Surface treatment with any form of waterproof, or "preservative" is not recommended, for it may accentuate flaking. Nor should renderings be applied externally direct to the brickwork. Apart from the difficulty of obtaining a good bond to the bricks, dense renderings (e.g. 1:3 cement-sand) will tend to prevent evaporation of moisture outwards and therefore worsen conditions internally.

(ii) Concrete

A dense concrete will not deteriorate, but weaker mixes may be affected in the same way as soft bricks and some types of stone. Concrete in foundations will not be affected and any new foundations caught in the floods need not be disturbed.

Normal good quality reinforced concrete will not be harmed, but steel in poor concrete, or where there is inadequate cover, will corrode and cause spalling of the concrete. Periodic examination should be made and repairs carried out if damage becomes apparent.

(iii) Natural Stone

The effect of salt on natural stone varies widely according to the type of stone and the quality. Some powdering of the surface may occur, with or without the appearance of efflorescence. At first nothing need be done beyond brushing off any salt that appears. If signs of disintegration become apparent, repeated washing with water in the manner described in B.R.S. Digest No. 20 may remove sufficient salt to retard the rate of decay. No surface treatment should be applied.

(iv) Wall Finishes

The condition of wall finishes will vary widely; some will be apparently unharmed, others will be seriously affected, but as already noted the residual salt in all will present problems in attempting to redecorate the existing surface. The following notes describe briefly the effect of immersion in sea-water on some common wall finishes.

(a) **Plasterwork.** Strong undercoats of cement and sand and of cement, lime and sand are not likely to suffer much deterioration. Weak lime finishing coats will suffer surface powdering as the result of wetting and subsequent crystallization of salts, and undercoats may lose their adhesion to the background. Calcium sulphate plasters will be soft whilst wet, but their condition on drying will be found to vary considerably. Some may harden sufficiently on drying to receive an emergency decoration or be suitable for treatment with foil. For all other treatments the condition of the plaster will be immaterial since the treatments involve its removal.

(b) **Building boards.** Plaster-board and fibre-board will be soft while wet, and will of course, be impregnated with salt. Although in some cases, such boards may dry out without much warping or twisting, the presence of the salt will make it difficult to redecorate them and replacement is advised. Asbestos cement is unlikely to have been harmed by immersion in sea-water. Thorough washing with clean water will remove much of the salt and in general, if the sheets are otherwise undamaged, they can be left in position and be redecorated on the lines normally adopted for new asbestos cement. (See B.R.S. Digest No. 38).

(v) Timber

Timber soaked in sea-water is not immune to fungal attack, although it may be rather less susceptible than is timber that has become damp with fresh water. Thorough drying (as far as salt in the timber allows) is essential. Timber, e.g. skirting boards, door frames, sills and joist ends and ground floor timbers generally attached to, or embedded in, damp walls, are in the most vulnerable positions and should be kept under observation. If access to the contact side becomes available during the course of other repairs, a coat of fungicide should be given. The application of fungicide to the exposed surfaces of timber is unlikely to be beneficial.

Cellar-rot (*Coniophora cerebella*) is more likely than the virulent dry rot (*Merulius lacrymans*). If the measures already suggested for drying out have been taken the risk of rot will be very largely eliminated, but it is recommended that the under-floor conditions be inspected in six and again in twelve months time. Inspection of timber floors may reveal parts that had been suffering from decay for a long time although not to an extent sufficient either to have caused structural failure or even to have been noticed before the floods gave occasion for detailed examination. Some of this long standing rot seen in the buildings inspected, was found to be due to earth lying above damp-proof course level. The flooding may accentuate this decay unless precautions are taken to eliminate its causes, e.g., soil raised above damp-proof course level, blocked air bricks.

Much painted timber has been seen that appeared to have absorbed little, if any, water and unless there are obvious signs of defects such as warping or blistering of the paint, nothing should be done after the first washing down unless, of course, it is desired to repaint for the sake of appearance.

(vi) *Metals*

Accelerated corrosion of most common metals will be caused by salt; steel, iron, aluminium, copper, zinc and brass will all be affected. Where the surface of the metal is accessible it can be washed down. If desired, a proprietary de-rusting solution may be used to assist removal of rust from iron and steel. The metal should then be painted or oiled to prevent normal corrosion or rusting; no permanent harm will then result. Hinges should be well oiled after washing. Where, however, iron or steel is embedded or encased in porous material that retains salt, corrosion must be expected, but apart from cutting away and replacing the salt-impregnated material, nothing can be done. This work would, in general, be too extensive to be undertaken as a routine operation, repairs should be made when damage becomes apparent. Careful inspection at intervals is advised. Nails in salty timber will be liable to rust. Again, inspection at intervals is recommended.

(5) *The Use of Flooded Stocks of Building Materials*

Materials in builders' yards that have been flooded should not be used indiscriminately and the following points may help in deciding what materials can be used.

Bricks should not be used for work above ground level except in temporary buildings where the dampness and efflorescence are not of concern. This applies also to precast concrete blocks,

e.g., clinker blocks and to roofing tiles. Sand should not be used for plastering or for mortar where the efflorescence and dampness is likely to be objectionable. Roofing and damp-course slates because of their lower absorption may be re-used after rinsing in water.

Repeated soaking with water followed by drying will eventually remove the salt from porous materials but it would seldom be practicable to do this on any large scale.

Timber will have absorbed salt water to a depth depending on the time it has been immersed. Absorption will have occurred mostly at the exposed end grain and in sap wood. Timber soaked in this way will be unsuitable for painting, for use in any position in a building where it can contaminate other porous materials, or where efflorescence and persistent dampness would be objectionable. There is always risk of corrosion of nails in salt-impregnated timber.

Some sheet materials such as asbestos cement may be little affected, but plaster-board and fibre-board, will have become soaked and may not be capable of withstanding handling to permit drying. Even if the sheets could be separated they will give trouble if subsequently decorated. Mostly, they will be unusable. Plywood bonded with glues not resistant to water similarly affected.

Thorough washing and removal of rust from iron and steel goods followed by painting treatment will be found useful in preventing further trouble where the expense is worthwhile. Cans containing paint, etc. may rust quickly and it is not advisable to leave stocks too long without examining their condition.

More on Advertising

WHEN I wrote on this subject last week I was unaware that within a few days the R.I.B.A. would be issuing two publications to draw attention to the work of the architect. These publications are certainly a very welcome first step in the right direction, but it remains to be seen what action will be taken to ensure that they are placed in the hands of those who might employ architects.

The first of the documents is a small leaflet entitled "Before you build." The leaflet presents the functions of an architect in a very brief and concise form. It is efficiently and pleasantly prepared, although perhaps it is a little too gentlemanly in appearance to catch the eye of those accustomed to commercial advertising. There is little in the document with which one could disagree other than the second paragraph relating to what the architect will design for the client in which the first sentence dwells too much, in my belief, on the idea of the preparation of an individual design; it is surely much more important to put over the idea of designing efficient buildings to suit the client's particular needs. The opening of this paragraph seems to have too much in mind the building of houses, whereas it is surely in the many other types of building, where the architect can display better his abilities and his services, that are even more important. Houses can, of course, be so individual that their selling value is greatly reduced. There will, in my opinion, always be a difficulty in that the architect has to attempt to compete by offering a piece of paper showing the design of a house while the builder shows the customer the finished product. I also question the final two sentences in this paragraph, which suggest that a badly de-

signed building is like a cheap toy which may look attractive but does not work. I should have thought that a badly designed building may equally look unattractive as well as being inefficient in its duties.

The second publication is on a larger scale, requiring 18 pages. This again is very nicely produced but as an advertisement seems to have one very serious fault, although this does not appear in the document. The fault, which is only learnt by consulting "Before you build," is that the document costs 6d. I think it would surprise architects if those wishing to sell their services or their products were to ask architects to pay for their catalogues. Surely if architects want to be employed the least they can do is to spend some money to make themselves known. I believe those who have been reasonably successful have found it necessary to do this and, so far, it has taken the form of playing golf, drinking cocktails and spending money on club subscriptions, so why not spend just a little more to put booklets such as this and other advertisements in the hands of a wider public.

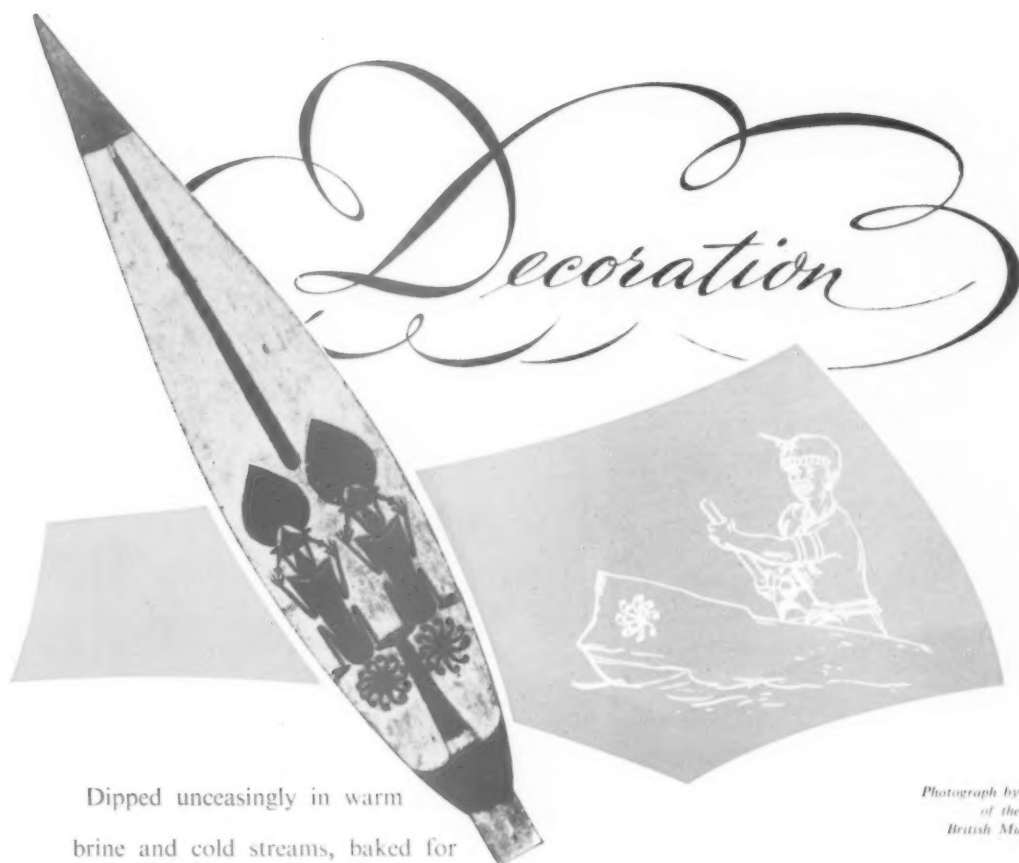
The second paragraph of "The architect and his work" relates to the choosing of an architect. It would appear that only those with very long experience can hope to get work as it is suggested that they should be chosen for their general reputation or special experience or, alternatively, by selection from a short list of names provided by the architectural bodies. I am a little bothered about the last method as I do not think the R.I.B.A. or its allied societies have ever made it clear to the general membership how short lists are prepared in a manner which gives an equal oppor-

tunity to all members.

The last paragraph of this section would have been much better left out. It is by no means certain that the public is very much protected by the Architects' (Registration) Acts. It is true that one can no longer become registered without passing certain examinations, but it is more doubtful that these examinations prove that a person is an efficient architect; this is not only applicable to architects but also to other callings. Furthermore, the statement that Fellowship is reserved for those who have completed seven years' practice will cut very little ice with the public, especially if they ever discover that no enquiries are made from clients to ensure that the architect concerned has given efficient service to his clients. It is probable that many clients will view Fellowship as merely being, as certain other letters after the users' names, something which may be purchased or attained after a period following the original and lesser qualification.

In the second section dealing with sketch designs I think it would have been fair to the client to have made clear that if a survey is to be made it has to be paid for as an addition to the normal fees. I am also somewhat bothered about the suggestion that sketch designs may need to be illustrated by models, as this appears to indicate that all architects will need to have experienced model makers in their offices or incur the very considerable expense of having models made outside the office, as from this document the client may assume that this is not something for which he will have to pay.

The third section, which deals with consultants and the quantity surveyor, again does not make adequately clear



*Photograph by courtesy
of the
British Museum*

Dipped unceasingly in warm
brine and cold streams, baked for
years in the scorching sun of the Solomon Islands,
yet the quaint figures on this wooden canoe-paddle
look as vivid and clear now as the day they were
painted.

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flowing finishes of exceptional brilliance, retain their colour and
elasticity in the face of age and every climatic extreme.



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LADYWOOD · BIRMINGHAM 16



A Window in Jamaica

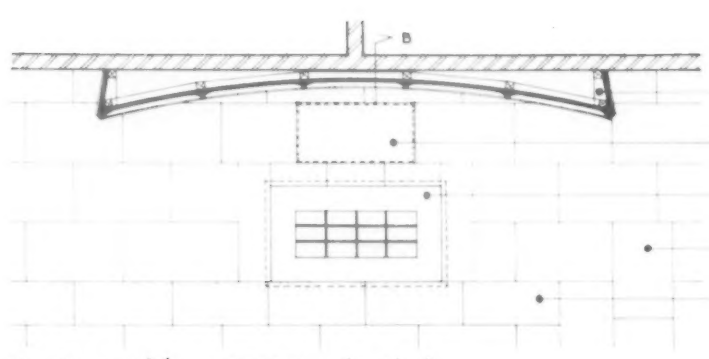
BY JOHN MINTON

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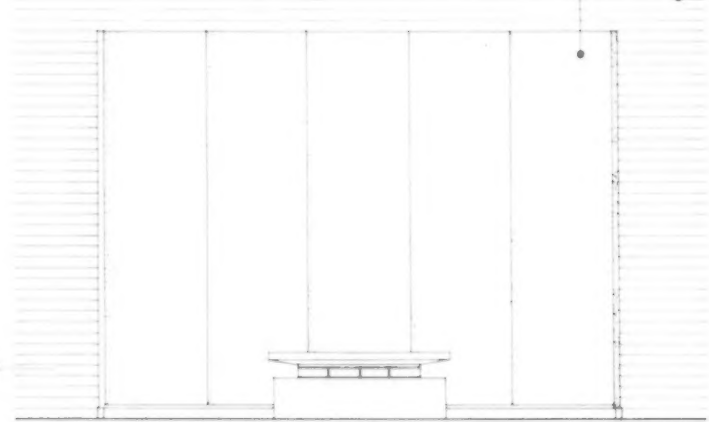


PLAN AT 'A' SCALE 1" = 4' 0"

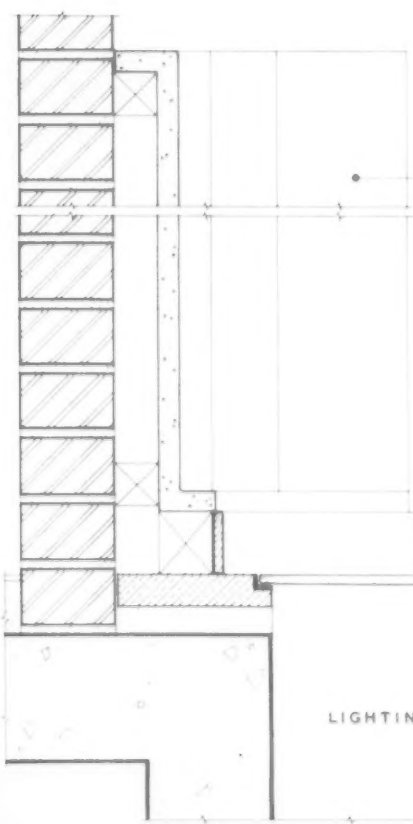
- TIMBER FRAMING
- LIGHTING TROUGH
- SCULPTURE PEDESTAL
- YORK STONE PAVING
- WESTMORLAND SLATE BAND
- FIBROUS PLASTER
- FAIR - FACED BK' WORK STRUCK POINTED
- EX. 3" x 1 1/2" GABOON SKIRTING



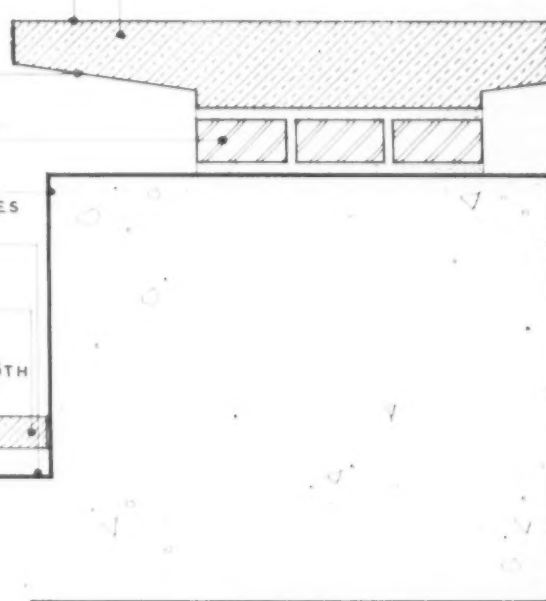
PLAN OF ONE END. SCALE 1 1/2" = 1' 0"



FRONT ELEVATION



- YORK STONE SLAB WITH COPED EDGES
- SAWN FACE
- FIBROUS PLASTER SCREEN
- SAWN FACE
- 2" BUFF FLINT BRICKS FLUSH POINTED
- CONCRETE BASE WITH BUSH - HAMMERED FACES
- CONCRETE FLOOR LEVEL
- YORK STONE PAVING
- 1/2" TOUGHENED GLASS SATIN ACID ETCHED BOTH SIDES IN BRASS ANGLE FRAME



SECTION AT 'B' SCALE 1 1/2" = 1' 0"



HATFIELD TECHNICAL COLLEGE, SCREEN AND SCULPTURE BASE
ARCHITECTS: EASTON AND ROBERTSON

who pays the fees for these necessary services. To say that the fees are a matter of agreement is rather inadequate. I cannot imagine that in normal circumstances the architect is willing to pay out of his fees those of the quantity surveyor or specialist consultants.

In the paragraph dealing with work on site I think it would have been advantageous if it had been made clear that not only does the client employ the Clerk of Works but he also pays him. It might also have been useful to make clear whether the errors of judgment made by the Clerk of Works, which need to be put right, are the responsibility of the client or the architect.

The paragraph which deals with fees is not nearly as helpful to prospective clients as it should be. I feel that the essential extracts from the scale of fees should have been included in this publication. Merely to be told that you are expected to pay on the basis of a scale does not give the least idea to the client of what total sum the fees may amount to. The paragraph, in fact, does not even say that clients may have a free copy of the R.I.B.A. scale on application.

Now these two documents exist, how will they be put into the hands of prospective employers? I would like to suggest, as a first step, that "Before you build" is printed in poster-form and copies of this poster sent for display on the notice boards of every public library, hotel and golf clubhouse in the country, accompanied by a copy of "The architect and his work." This should be followed up by sending a copy of "Before you build" to every householder throughout the country whose income may be expected to exceed £1,000 p.a. There is no great difficulty in achieving this as there are agencies who maintain efficient mailing lists. Contact should also be made with all Chambers of Commerce and trade associations to distribute free of cost copies of "The architect and his work." This may sound a fairly costly proposal, but unless the profession undertakes a fairly extensive campaign to bring its services before the public it may reasonably assume that it will die away.

I would like to make a further suggestion that the foregoing publicity should be accompanied by a national advertising campaign, starting on the lines suggested on this page last week, and be followed by the words shown below inserted in the better weekly and monthly journals, other than the building papers, in every issue for at least two years.

If the R.I.B.A. feels it cannot face a reasonable campaign to press its services on the public, what does it propose to do with the two publications now available? They are useless unless they are adequately distributed. No doubt some distribution can be made in connection with the R.I.B.A. exhibitions, but this will not reach all the public with whom contact is

CONSULT AN ARCHITECT

needed; it is to be hoped, however, that at exhibitions the 6d charge for the one publication will not be made. Could not some advantage be taken of trade exhibitions to call attention to the work of the architect, by staging displays of architecture related to the production and use of the articles in each trade exhibition, omitting, of course, the Building Exhibition, which probably attracts very few clients who are not already aware of the functions of an architect.

DUTCH UNCLE

Law Report

Mr. Elmer Sykes, Huddersfield Gas Engineer, and Mr. J. C. M. Hoyle, Elland Urban District Architect, were on friendly terms, and so when the former decided to build his £2,000 house, Ridgeways, in Grimsar Road, Fixby, he requested Mr. Hoyle to prepare partial plans to enable him to get contractors' tenders. Working on them in his spare time, Mr. Hoyle, after completing them, sent in his bill—a "friendship fee" of £52 10s, but received no payment. Meeting on the New Elland housing site, some time later, the two officials discussed the bill. The outcome was that the friendship broke down, and Mr. Hoyle consulted the charges laid down in his "Royal Institute of British Architects" booklet, which ruled an architect's fee of 4 per cent of the cost of the house. He consequently sent Mr. Sykes an amended bill of £80, as "professional fee," and later sued Mr. Sykes in the Halifax County Court. Mr. Sykes explained his failure to pay by saying that he considered the fee exorbitant, and he was told by Judge Myles Archibald: "Mr. Hoyle wanted to let you down lightly. The plans were sufficient for the contractors and for the local authority. Work was done." He ordered him to pay Mr. Hoyle the £80 with costs.

Fuel Efficiency and Smoke Abatement Exhibition

An exhibition is being held by the Solid Smokeless Fuels Federation at Charing Cross Underground Station by permission of the London Transport Executive from Tuesday, April 7, to Saturday, April 25, and is open week-days from 10 a.m. to 7.30 p.m. The objects of the exhibition are:

(1) To show how much more efficient domestic heat services are when solid smokeless fuels are used, in modern appliances.

(2) To demonstrate that solid smokeless fuels will abolish smoke pollution, caused largely by domestic chimneys.

The Solid Smokeless Fuels Federation is representative of virtually the entire production of these fuels in Britain, amounting to some 34,000,000

tons per annum. A list of approved domestic solid smokeless fuel appliances and recommended fuel sizes and data can be obtained on request to: 1, Grosvenor Place, S.W.1.

T. & C.P.A. Study Tours

The Town and Country Planning Association are organizing a series of Holiday and Study Tours, particulars of which may be obtained by writing to the Secretary, at the Planning Centre, 28, King Street, Covent Garden, London, W.C.2. The Tours are as follows:

Scotland, May 16-23. Itinerary: Edinburgh, Glenrothes, St. Andrews, Arbroath, Angus, Aberdeen, Balmoral, Braemar, Grantown-on-Spey, Pitlochry (Tunnel-Garry Hydro Electric Works), East Kilbride and Glasgow. Inclusive cost £25. Party limited to 30.

Welwyn Garden City, Hatfield and Harlow, June 24. Tickets, including lunch and tea, 21s.

Crawley New Town, July 16. 18s 6d.

Tour of France, Sept. 20-Oct. 4. Arrangements for this tour are proceeding with the French planning authorities. The party will be shown the new Rhone hydro-electric scheme, and L'Unité D'Habitation at Marseilles. Approximate cost £60.

Reduced Price for Complete Sets of Final Codes of Practice for Buildings

The Council for Codes of Practice, Construction and Engineering Services, has now published 86 Codes in final form. The total price of these Codes is £16 18s 6d, but the publishers, the British Standards Institution, 24, Victoria Street, London, S.W.1, will supply on demand the complete set of 86 documents at the special price of £12 for the set, post free.

This price is subject to revision as further final Codes are published.

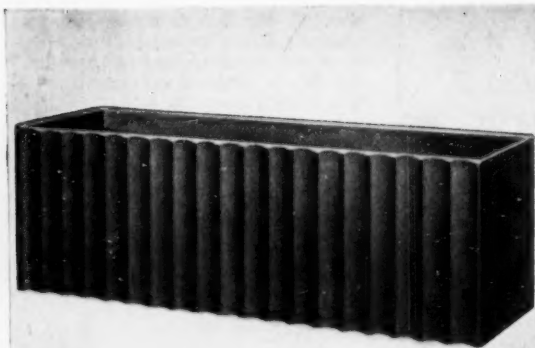
Electrical Engineers Exhibition

This Exhibition took place at Earls Court from 25th to 28th March and was opened by Sir John Hacking, Deputy Chairman (Operations), British Electricity Authority. The exhibition showed most of the latest developments in the industry, many of which are of great interest to the architect and builder. To mention a few of the more interesting exhibits, the E.M.S. Trolley Duct Feed Rail allowing a high degree of flexibility of power take-off in factory and workshop; a mains distribution unit with main double pole switch, earth leakage circuit breaker and fuse board for up to seven sub-circuits made by Chiltern Electric Products, Ltd., who have also produced an electric razor socket that will take all known types of British, Continental and American plugs and is particularly suitable for hotels. A new Floodlight by Benjamin Electric, Ltd., suitable for mounting on pole tops for the illumination of open areas.

MOSAICS

INDUSTRIAL NOTES

STRUCTURES FACING MATERIALS A 9/2



The Coronation will increase the number of window displays of flowers. Shown here is one of these miniature garden containers fabricated in Asbestos cement sheet 3/8 in thick.

These boxes in a number of different sizes and in shapes to suit requirements may be ordered from Messrs. Dalton, Ballard & Co., Ltd., Fleet Place, Upper Park Road, London, N.W.3.

FITTINGS FURNITURE C 8/3



Sebel Products Ltd., 39-41 New Oxford Street, London, W.C.1 produce this stoutly built folding table. Light in weight and economical in space this table is the newest addition to the firms Fold-A-Bye range.

The table measures 3ft 8in x 2ft x 28in high. The price is £4/17/6.

FITTINGS FURNITURE C 8/4



Also from Messrs. Sebel Products Ltd. (see C 8/3) comes this new folding chair which is produced in a range of enamelled colour finishes. When folded the chair measures only two inches in thickness.

Opened, the chair occupies a floor space of 17in x 20in, has a seat width of 14in and seat depth of 15in. The overall height is 31in.

Frame, seat and back are of steel. A rayon pile finish for the seats is available in red, green or brown.

When supplied permanently clamped in rows of two, three or four for use in Auditoria the chairs are exempt from purchase tax.

Unlike many folding devices this one does not nip the fingers.

PLANT SITE GEAR E 2/10



Messrs. Scott of Oldham manufacture this portable boiler for use on building sites—particularly for remote sites.

It is claimed that 8 gallons of water can be boiled in 20 minutes: the only fuel being wood chips. This is achieved by designing the boiler with a large base area and carrying the flue through the centre of the boiler.

A brass draw-off cock allows 6½ gallons to be drawn off leaving 1½ gallons to cover the combustion chamber.

The whole boiler weighs 90 lb.

● British firms have carried out a rush job to despatch overseas structural components for the United Kingdom Pavilion for the Cecil Rhodes Centenary Exhibition, one of Africa's biggest-ever shows, which will be opened by the Queen Mother, accompanied by Princess Margaret, at Bulawayo in July.

The order for the Pavilion, a 130-ft long treble-span lightweight steel structure costing more than £5,500, was placed by the Board of Trade with Taylor Woodrow (Building Exports), Ltd., acting on behalf of the Arcon group of firms, on January 1. The materials were earmarked on January 2. Shipping instructions were sent on January 3. The materials and component parts were collected from factories of members of the Group at Newport, Mon.; Scunthorpe, Lincs; and Manchester, delivered to the dockside on January 16, and were at sea shortly afterwards.

The building will house the many exhibits representative of the British "way of life," industry and culture, under a layout supervised by Mr. Misha Black and the senior architect with whom he is collaborating, Mr. Alexander Gibson, who recently left for Rhodesia.

One of the advantages of the type of structure used is that it can be dismantled and adapted to other purposes when the exhibition is over. A similar building erected for the celebrations at Colombo, Ceylon, last year, is now let as ware-houses and factories.

● Mr. C. E. Weeden has been appointed Publicity Officer to Glass Manufacturers' Federation, which was founded in 1926, and which is the central Trade Association for the British Glass Industry.

● Mr. Ronald W. T. Bray, Managing Director of W. E. Bray and Company, Ltd., manufacturers of dozer and loading equipment, will be leaving on April 23 on a tour of the United States and Canada. He will study the latest trends in the design and use of various types of plant, together with manufacturing methods and procedures.

● The General Electric Co., Ltd., announces a further reduction in price of its 80 W single-channel fluorescent lighting fittings. The channel fittings F 36570 and F 36568 will be reduced from £6 5s to £5 10s complete with switch start gear. Corresponding reductions of fittings with instant start gear (F 36571 and F 36569) will be from £7 7s 4d to £6 12s 4d.

● The Coal Utilization Council will hold its first post-war Convention in Harrogate on Wednesday and Thursday, October 14 and 15, 1953, to discuss the use of Solid Fuel in the House.

Details of the programme will be announced as soon as possible. Registration forms for those wishing to attend the Convention will be distributed early in June.

● The telephone number of the new headquarters of Semtex, Ltd., at Semtex House, The Broadway, Welsh Harp, N.W.9, will be Hendon 6543.

Notes below give basic data of contracts open under locality and authority which are in bold type. References indicate: (a) type of work, (b) address for application. Where no town is stated in the

CONTRACT • NEWS •

address it is the same as the locality given in the heading, (c) deposit, (d) last date for application, (e) last date and time for submission of tenders. Full details of contracts marked ★ are given in the advertisement section.

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OPEN BUILDING

ALSTON-WITH-GARRIGILL R.C. (a) 2 houses and 2 blocks of 4 flats, Nenthead. (b) Council's Clerk, Town Hall, Alston. (c) 2gns. (e) April 13.

AYLESBURY R.C. (a) 26 dwellings, Whitechurch. (b) Raymond C. White, 4, Temple Square. (c) 3gns payable to Council. (e) April 14.

BARNARD CASTLE R.C. (a) (1) 46 houses at Evenwood, and (2) 32 at Gainford. (b) J. Lawton, 45, Galgate. (c) 2gns each contract. (e) April 11.

BIRMINGHAM C.C. (a) Completion of the erection of the St. Martin's toll market and underground car park (reinforced concrete work), Edgbaston Street. (b) Town Clerk, Room No. 17, Council House 1, with list of similar works recently carried out and their approx. value. (d) April 13.

BLYTH R.C. (a) 6 houses and 4 bungalows, Saxtead Green. (b) H. W. Lovell, Council Offices, Rendham Road, Saxmundham. (c) 2gns. (e) April 16.

BOLTON C.C. (a) Filter house, filter attendant's house and pump house for Springs filtration scheme. (b) Waterworks Engineer, Town Hall. (c) 3gns. (e) April 17.

BRISTOL C.C. (a) Primary school, West Town Lane, Brislington (approx. floor area 13,300 sq ft, steel frame construction). (b) City Architect, Council House, College Green, 1. (c) 2gns cheque payable to Corporation. (d) April 8. (e) May 15.

BUSHEY U.C. (a) 6 garages and construction of approx. 500 sq yds of road at Scottswood Road, Bushey Hall Farm Estate and 9 garages and approx. 800 sq yds of paving at Moatfield Road, Coldharbour Estate. (b) Engineer and Surveyor, Council Offices, Rudolph Road. (c) 1gn. (e) April 13.

CARDIFF C.C. (a) Cleansing depot, Wedal Road. (b) City Surveyor's Office, City Hall. (c) 2gns. (e) April 13.

EASTHAMPTON R.C. (a) Conversion of the Old Forge, Stanley Road, Bracknell, into public conveniences. (b) Engineer and Surveyor, Council Offices, Church Road, Bracknell. (c) 1gn. (e) April 13.

HAVANT AND WATERLOO U.C. (a) Block of 8 flats, Purbrook Estate. (b) Engineer and Surveyor, Council Offices, 1, Park Road North, Havant. (c) 3gns. (e) April 14.

ISLE OF MAN EDUCATION AUTHORITY. (a) Adaptations, etc., at Onchan School. (b) Messrs. Davidson, Marsh and Co., 16-18, Athol Street, Douglas. (c) 5gns. (e) April 13.

KEIGHLEY B.C. (a) 14 houses, Colne Road Estate, Oakworth. (b) Borough Architect, College Street. (c) £2. (e) April 14.



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LLEYN R.C. (a) 6 houses, Llanael-haiarn. (b) Council's Clerk, Metro Buildings, Pwllheli. (c) 2gns. (e) April 14.

LUTON B.C. (a) Proposed Ramridge junior school as extension to Infants' School. (b) Borough Engineer, Town Hall. (c) 2gns. (e) April 14.

LUTTERWORTH R.C. (a) (1) 12 houses at Broughton Astley and (2) 4 houses at Walcote. (b) Council's Surveyor, Council Offices, Lutterworth, near Rugby. (c) 2gns. (e) April 14.

MANCHESTER C.C. (a) Public convenience at Ogden Lane, Higher Openshaw. (b) City Architect, Town Hall. (c) 1gn. (e) April 11.

NEWCASTLE-UPON-TYNE C.C. (a) Conversion of Kildale and Singleton House, Clayton Road East, Newcastle-upon-Tyne, 2, to form a school of art and industrial design. (b) City Architect, Education Section, 18, Cloth Market, immediately. (c) April 20.

NEWCASTLE-UPON-TYNE E.C. (a) Caretaker's house at Benton Park Primary School. (b) Director of Education, City Education Office, Northumberland Road. (c) £2 cheque payable to Education Committee. (e) April 30.

N. IRELAND—BALLYCASTLE R.C. (a) 8 bungalows at Ballyvoy and 4 at Castlenagree, Bushmills. (b) Council's Clerk, Council Offices. (c) 3gns each site. (e) April 14.

N. IRELAND—BELFAST C.C. (a) 28 flats, Flush Park Estate. (b) Housing Architect's Department, 94, Chichester Street. (c) £5. (e) April 14.

N. IRELAND—TANDRAGEE R.C. (a) 4 cottage-type dwellings at Marlacoo-beg, Tandragee, and 4 at Lisavague, Tandragee. (b) Messrs. Ogilby and McCutcheon, Lombard Street, Belfast. (c) £5. (e) April 18.

NORWICH C.C. (a) Alterations and repairs at the Reception Centre, West Norwich Hospital, Bowthorpe Road. (b) City Architect's Office. (c) £1. (e) April 10.

PENYBONT R.C. (a) 26 houses, Cot Farm site, Cefn Cribbwr. (b) Council's Surveyor, Penybont Offices, Coity Road, Bridgend. (c) 2gns. (e) April 14.

REDDITCH U.C. (a) 30 houses on one site and 26 houses on five corner sites, with 130 lin. yds of 16ft-wide roadway, Batchley Estate. (b) Engineer and Surveyor, Council House. (c) 2gns. (e) April 20.

ROCHDALE B.C. (a) 4 garages off Nook Terrace, Nook Estate; 8 garages at Romney Avenue, Kirkholt Estate; 16 bungalows at Chatworth Street, Nook Estate; and 12 bungalows at Kingsland and Royelands, Manchester. (b) Borough Surveyor, Town Hall. (c) 2gns. (e) April 20.

SALFORD C.C. (a) Supply and erection of complete fuelling installation (excluding provision of storage tanks), Weaste Depot, Eccles New Road. (b) General Manager, Salford City Transport, General Offices, Frederick Road, 6. (c) April 10.

SALTBURN AND MARSKE-BY-THE-SEA U.C. (a) 12 houses, "The Parkway." (b) Engineer and Surveyor, Council offices, Saltburn-by-the-Sea. (c) 2gns. (e) April 13.

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ARCHITECTS' PLAN CHESTS**

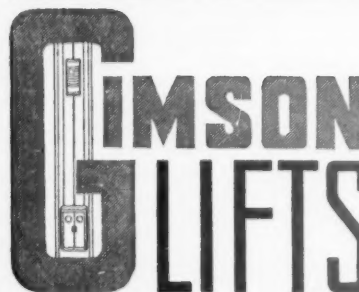


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SHEPTON MALLET U.C. (a) Shop with flat above, Ridgeway Estate. (b) Messrs. R. J. Beswick and Son, 10, Victoria Road, Swindon, Wilts. (c) 1gn. (e) April 11.

SMALLBURGH R.C. (a) Council depot, garages and pair of cottages at Stalham. (b) Council's Clerk, Council Chambers, Stalham, Norwich. (c) 2gns. (d) April 7. (e) May 4.

WALSALL B.C. (a) Block of 4 maisonnettes, Bath Street. (b) Borough Engineer, Council House. (c) 2gns. (e) April 16.

WALSALL B.C. (a) 12 flats in 2 blocks, Green Lane. (b) Borough Engineer, Council House. (c) 2gns. (e) April 16.

WELSHPOOL (MONTGOM.) (a) Additions and alterations at the Old Grammar School, Berriew Street. (b) A. W. Bavin, Secretary of the Welshpool Lodge of Freemasons, No. 998, Glasnevin, Welshpool. (c) 2gns. (e) April 15.

WEST ASHFORD R.C. (a) 100 houses on a portion of Hothfield Common, Ashford, Kent. (b) J. R. Mann, 16-18, High Street, Canterbury. (c) 2gns. (e) April 16.

WEST SUSSEX C.C. (a) (Job No. 2954). Primary school at Tangmere, near Chichester. (b) County Architect, County Hall, Chichester. (d) April 21.

WETHERBY R.C. (a) 14 houses, Woodacre Green, Bardsey. (b) Messrs. Anthony Steel and Owen, 89, Albion Street, Leeds, 1. (e) April 13.

YORK C.C. (a) (1) 2 blocks of aged persons' dwellings at Thorn Nook, Muncaster, and (2) hairdresser's shop with flat above at Tostig Avenue. (b) City Architect, 8, St. Leonard's Place. (c) (1) £3 and (2) £2. (e) April 20.

MISCELLANEOUS

BRISTOL C.C. Applications are invited from Contractors for various school building works during 1953-54 (from 12,800 sq ft to 31,000 sq ft in size). Names to City Architect, The Council House, College Green, Bristol, 1, with evidence of experience in erection of steel and reinforced concrete framed buildings of this type.

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Notes on contracts placed state locality and authority in bold type with (1) type of work, (2) site, (3) name of contractor and address, (4) amount of tender or estimate. † denotes that work may not start pending final acceptance, or obtaining of licence, or modification of tenders, etc.

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NOTTINGHAMSHIRE E.C. (1) Secondary school. (2) Hucknall. (3) J. W. Stamp and Co., Ltd., Bobbers Mill, Nottingham. (4) £185,357.

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PORTSMOUTH CITY COUNCIL. (1) 156 flats. (2) Eastern Road. (3) Gosport and District Builders' Guild, Ltd., 48, George Street, Portsmouth. (1) 63 flats. (2) Northern Parade. (3) Hawkins Bros. (Gosport), Ltd., Westfield Road, Gosport. (4) £246,767 and £87,719, respectively.

BOLTON CORPORATION. (1) Second instalment, Great Lever School. (3) Stanley Porter, Ltd., Crofter Saw Mills, Bolton. (4) £103,537.

PORTSMOUTH CORPORATION. (1) 128 houses. (2) Leigh Park. (3) Faulkners, 113a, London Road, Waterloo, Hants. (4) £181,120.

BRISTOL CITY COUNCIL. (1) 54 and 180 Cornish unit houses. (2) Henbury and Hartcliffe Estates. (3) Selleck, Nicholls and Co., Ltd., St. Austell, Cornwall. (4) £77,957 and £259,590.

LONDON E.C. (1) Office block for London Express Newspapers, Ltd. (2) Shoe Lane, E.C.4. (3) Trollope and Colls, Ltd., 41, Great Queen Street, London, W.C.1. (4) £120,000.

NOTTINGHAM CORPORATION. (1) Second stage of William Sharp secondary school. (2) Bilborough. (3) T. Bow, 45, Lamartine Street, Nottingham, and Orlit, Ltd., London, S.W.1. (4) £57,682. (1) Second stage of grammar school. (2) Bestwood. (3) G. A. Pillatt and Son, Ltd., Quorn Road, Nottingham. (4) £98,000 (negotiated).

WALSALL B.C. (1) 132 flats. (3) Sir Alfred McAlpine and Son, Ltd., Waterloo Road, Wolverhampton. (4) £144,151. (1) 98 houses. (3) United Construction (Walsall), Ltd., 54, Green Lane, Walsall. (4) £134,167. (1) 40 houses. (2) Gipsy Lane. (3) Austin and Co., Rushall, Walsall. (4) £54,994.

NEWARK B.C. (1) 84 dwellings. (2) Hawton Road. (3) Ernest Coleman, Ltd., 20, Diamond Avenue, East Kirby, Notts. (4) £104,349.

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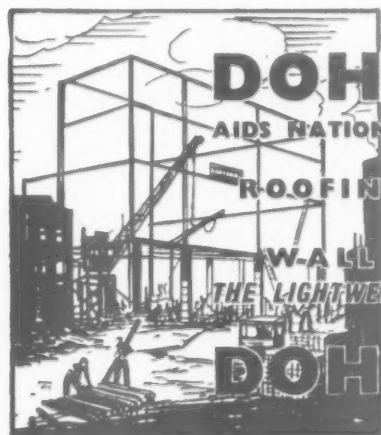


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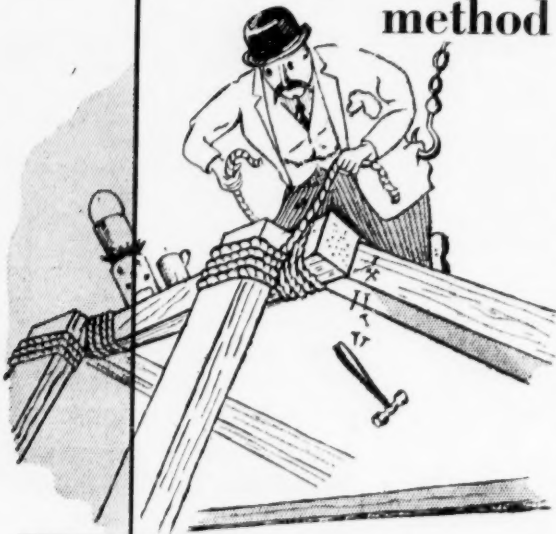
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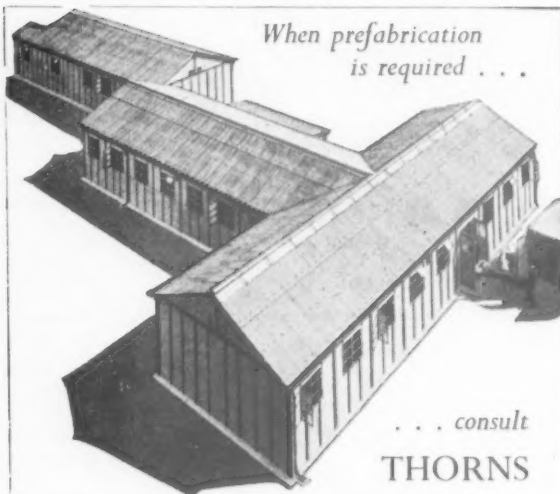
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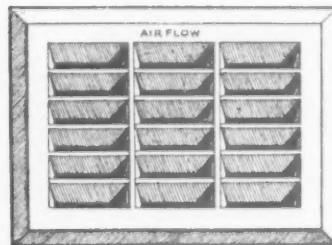
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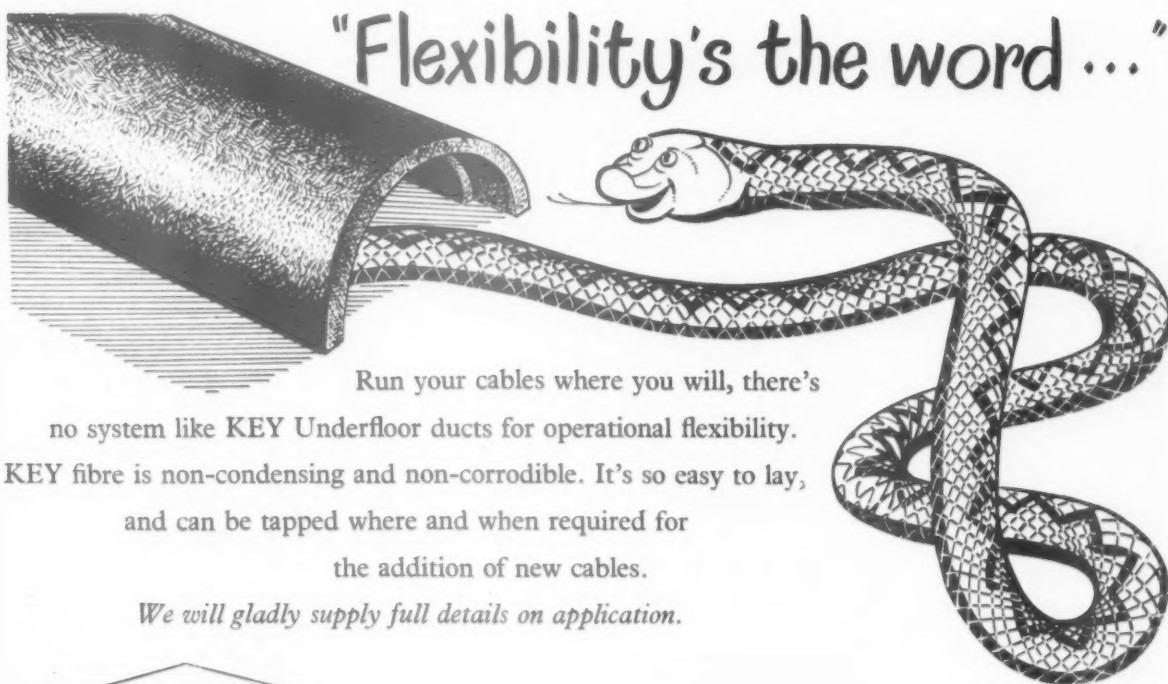
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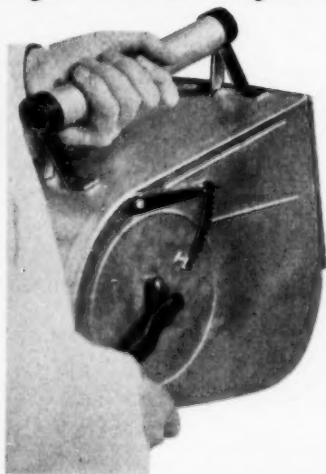


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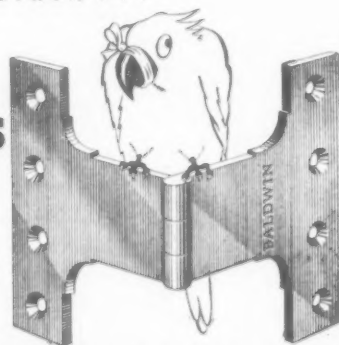
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APPOINTMENT OF STAFF TO ARCHITECT'S BRANCH.

APPLICATIONS are invited for the following appointment in the Architect's Branch of the Birmingham Education Department (Architect to the Committee: Mr. J. R. Sheridan-Shedden, A.R.I.B.A.).

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Salary: General Division (£160-£450, according to age).
Applicants should be good draughtsmen with some experience in the preparation of drawings in an architect's office.
- (iii) CLERK OF WORKS.
Salary: Miscellaneous Grade VI (£525 × £15 - £585).
Applicants should have a thorough technical training in building construction and materials and experience of large building contracts.
- (iv) ASSISTANT CLERK OF WORKS (Temporary).
Salary: Miscellaneous Grade IV (£440-£495).
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Application forms, which may be obtained from the undersigned on receipt of a stamped addressed envelope, must be returned not later than three weeks after the appearance of this advertisement.

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[7001]

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Apply in writing, stating age, nationality and full details of training and experience, to the Chief Architect, Ministry of Works, Abell House, John Islip Street, London, S.W.1, quoting reference W.G.10/C.A.1. [6891]

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Application forms may be obtained from the Clerk of the Council (E.1), The County Hall, S.E.1, and should be returned not later than 24th April '53. [7015]

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Close for press 1st post Monday for following Thursday Issue

APPOINTMENTS—contd.

BERKSHIRE COUNTY COUNCIL.

APPLICATIONS are invited for the following appointment in the County Architect's Department—

SENIOR ASSISTANT QUANTITY SURVEYOR—Salary Grade VIII (£760-£835).

Candidates should have passed the Final Examination of the Royal Institution of Chartered Surveyors in the Quantities Sub-Division and should have had considerable experience in taking-off in accordance with the Standard Method of Measurement for large building projects.

Application forms and further particulars obtainable from the County Architect, Wilton House, Parkside Road, Reading, to whom they should be returned completed by noon on Thursday, 16th April, 1953.

E. R. DAVIES,
Clerk of the Council.

Shire Hall,
Reading,
March, 1953.

[7016]

CONTRACTS

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Forms of Tender, Bills of Quantities, Conditions of Contract and Specification may be obtained from and detailed Drawings inspected at the offices of the Council's Architects, Messrs. Gilbert & Hobson, L./A.R.I.B.A., Lloyd Bank Chambers, 75, Castle Street, Farnham, Surrey, upon payment of a deposit of £2 which will be returned upon receipt of a bona fide Tender (not subsequently withdrawn) or on return of the documents.

Tenders must be delivered to the undersigned in plain sealed envelopes endorsed "Tender for Housing—Weydon Lane (East) Site" not later than 12 noon on Monday, 27th April, 1953.

The Council does not bind itself to accept the lowest or any Tender.

A. A. MINNS,
Clerk of the Council.

Council Offices,
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Farnham, Surrey

[7019]

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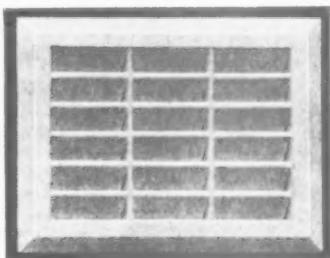
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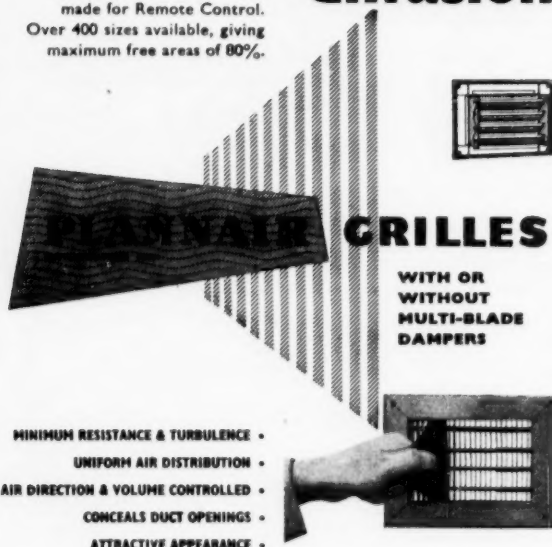
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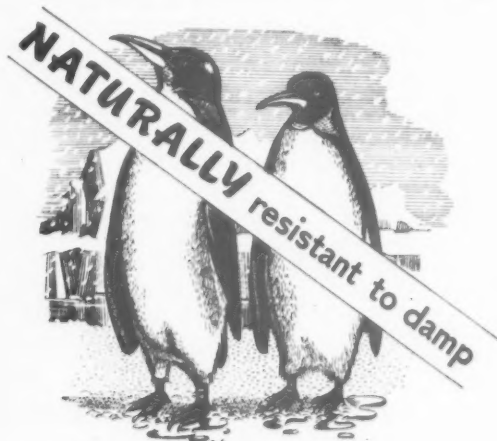
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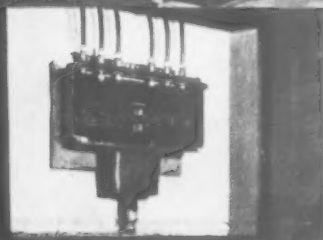
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